



AMERICAN COLLEGE OF
Lifestyle Medicine

BEYOND THE NUMBERS:

A LIFESTYLE MEDICINE APPROACH TO PEDIATRIC OBESITY

T O O L K I T



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Dear Lifestyle Medicine Clinician,

Mahatma Gandhi said “*Health is wealth, and not pieces of gold or silver.*” The dual pandemics of obesity and COVID-19 highlighted the value of our health in a new way that has sparked curiosity in many families about making changes. The good news is that we have more control over our health than we realize, and often in very simple ways.

Health professionals have the privilege and opportunity to help patients and families take charge of their health through habit change. Lifestyle medicine provides an evidence-based framework utilizing 6 lifestyle interventions that work synergistically to prevent, treat and even reverse chronic disease.

The goal of this toolkit is to provide guidance for the evaluation and management of school-aged children and adolescents with overweight and obesity using a lifestyle medicine approach. This model acknowledges the complexity of obesity and tailors the approach to habit formation based on readiness to change or “meeting patients where they are.” The synergy of the lifestyle interventions allows providers to approach this common chronic disease in a way that directly connects to patient and family priorities.

Included from the authors are favorite office tools and resources to make your job a little easier. Feel free to tailor these resources to your setting. We encourage you to be curious about which pieces are most feasible in your office setting to best serve your patients and their families. Thank you for being a champion for children!

Sincerely,

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Part I: First Do No Harm

It is important to start this toolkit, and our conversations with patients, with a sensitive and thoughtful approach. **Weight stigma** refers to the labeling, stereotyping and discrimination of people on the basis of body size or weight. Weight stigma is prevalent in the United States¹ and although weight stigma is often justified as a way to motivate individuals to adopt healthier behaviors, it often has the opposite effect.^{2,3,4,5}

In order to reduce harm caused to children from weight stigma, we must first become aware of our own biases. Because weight bias is so prevalent most health care professionals will have weight bias whether they realize it or not.^{4,6} Becoming aware may at least begin to reduce perceived weight stigma on the part of the patient and their family. The next step is to remove the focus from body size and instead teach and support the development of healthy lifestyle habits according to the pillars of lifestyle medicine.^{7,8}

Weight stigma can strongly affect children. Children in larger bodies experience stigma from multiple sources: parents, family, teachers, and health care providers. Weight stigma toward children affects their physical and mental health and leads to a lower health-related

quality of life. Children experiencing weight stigma are more likely to binge-eat as a coping mechanism and use unhealthy weight control practices. They are more likely to avoid exercise, delay or avoid seeking health care and even engage in substance abuse. Weight stigma may be for some a chronic stressful experience that can lead to activation of inflammatory pathways that increase the risk of disease.^{1,2,9,10}

STARTING THE CONVERSATION

Keep the focus of discussion on health, longevity, and developing sustainable healthy habits.^{11,12} Ask permission to discuss the changes you see on the growth chart. Use language that is respectful and centered around “acceleration” or “increases across percentiles” over a period of time. Invite curiosity about whether these changes are indicators of health issues, changes in their life, or family habits/patterns. Nonjudgmental, open-ended questions are much more likely to get to the root cause.



RESPONDING WHEN ASKED “HOW DO I LOSE WEIGHT?” OR “HOW MUCH SHOULD I WEIGH?”

Emphasize that the number on the scale is much less important than day-to-day habits regarding eating, joyful movement, sleep, etc. Explain that body weight is impacted by both habits and genetics so it is valuable to focus on adopting healthy habits, and in response the body weight will adjust based on genetic potential.¹³ The goal is creating sustainable healthy habits.

TAKING THE FOCUS OFF WEIGHT

There are many times when it is necessary to measure weight in the office, such as during well checks and for calculating medication doses. However, we recommend using discernment about methods used and how often to obtain weight on children presenting for frequent follow-ups. A thoughtful approach will shift focus onto healthy habits and behaviors rather than body weight. If a patient or parent has a sensitive history regarding weight (i.e. eating disorder), consider having them weigh standing backwards, weigh in a private area, and remove data from printed patient materials. If you find a method that works well, note this in the chart for future visits.

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Part 2: Importance of the Lifestyle Medicine Pillars

The goal of [Beyond the Numbers: A Lifestyle Medicine Approach to Pediatric Obesity](#) is to provide guidance for evaluation and

management of school-aged children and adolescents with overweight and obesity using a lifestyle medicine approach. All lifestyle medicine pillars are evidence-based for the prevention, management and even treatment of chronic disease. The strength of using a lifestyle medicine approach is addressing chronic disease (in this case obesity) using any of these 6 pillars in any order that works for the patient and family.

There is a synergy to the effectiveness of the 6 pillars and one healthy habit usually leads to another.

PRIMARY PREVENTION IS KEY

Providing anticipatory guidance around healthy habits starting in pregnancy and infancy is the best way to normalize healthy habits and promote a weight-neutral approach to healthy lifestyles. Focus should be on the parent or caregiver's health, the habits of the family unit, and specific guidance tailored to the age of the infant or toddler. The [ACLM 0-5 Toolkit](#) is a complete resource for tips on how to support families from birth to five years old.



6 WAYS TO TAKE CONTROL OF YOUR HEALTH



Pillar I: Predominately Whole Food Plant-Based Nutrition

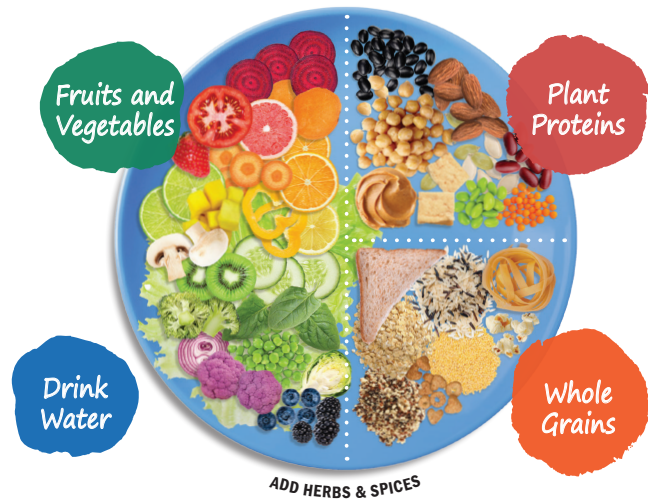
In our modern times of fast food, fad diets, and information overload, it is important to deliver effective messages about healthy eating to children and their families. Simple messaging from a trusted healthcare provider is a powerful tool for patients interested in improving their health.

Nutritional advice should be directed toward the entire family.

- Emphasize nourishment through a wide variety and abundance of whole plant foods.
- The role of caregivers is to model a healthy lifestyle and involve the whole family.
- The home environment should make the healthy choice the easy choice.
- Singling out a family member for habit change is harmful.
- Food restriction and ‘policing’ should be discouraged.

Predominately Whole Food Plant-Based (WFPB) nutrition is often considered the most impactful of the 6 pillars of lifestyle medicine for prevention and management of chronic disease, including obesity. A WFPB diet *maximizes* vegetables, fruits, whole grains, legumes, nuts and seeds. A WFPB diet *minimizes* highly processed foods and refined carbohydrates, salt and sugar, fats and oils, meat and dairy.¹ The Standard American Diet (SAD), on the other hand, is high in calories, added sugar, refined grains, saturated fat, cholesterol, and sodium, all of which are considered unhealthy for most chronic disease treatment, prevention and remission. A predominantly WFPB diet is rich in nutrients, fiber, antioxidants, and phytonutrients, all of which are under consumed in

America. Only 7% of Americans get enough fiber in their diet.^{2,3,4}



In 2016, The Academy of Nutrition and Dietetics stated that “well-planned vegetarian/vegan diets are appropriate for individuals during all stages of the life cycle, including pregnancy, lactation, infancy, childhood, adolescence, and for athletes”.⁵ The 2020–2025 Dietary Guidelines for Americans includes a healthy vegetarian eating pattern for children aged 12 to 23 months.³

WHAT ARE THE KEY BENEFITS OF WFPB NUTRITION?

- Much higher in nutrient density per calorie.⁶
- Much lower in **calorie density** per pound due to higher fiber and water content.
- Contains no cholesterol and minimal saturated fat, added sugar and sodium.^{8,9,10}
- Fiber is **ONLY** found in plants and has many health benefits.

- Fiber is essential for gut health and immune function^{11,12}
- Fiber lowers risk for heart disease (which starts in childhood)^{13,14}
- Fiber lowers insulin resistance and diabetes¹⁵
- Fiber improves hypercholesterolemia¹⁶
- Fiber reduces the risk of colon cancer¹⁷

SETTING NUTRITION GOALS

To address nutrition related changes in clinical practice, setting TAF goals can be helpful. TAF stands for Type, Amount, Frequency which is a succinct and effective way to help patients set goals.

EXAMPLE	
(T)	Type: Vegetables as a snack
(A)	Amount: One carrot
(F)	Frequency: Mon-Fri

Further reading on a well-planned plant-based diet can be found in the [ACLM Food as Medicine Jumpstart Guide](#).

MINDFUL EATING, CULTURAL CURIOSITY, AND CREATIVITY

Just as we should promote responsive feeding patterns in the infant and toddler years,¹⁸ it is important to *teach children* (in an age-appropriate manner) how to recognize hunger and satiety cues and practice mindful eating. A helpful rule to *teach parents* is Ellyn Satter's Division of Responsibility, which acknowledges the responsibility of both parent and child when it comes to feeding.



You are responsible for what, when, and where. Your child is responsible for how much and whether.

- Ellyn Satter's Division of Responsibility In Feeding



Cultural sensitivity builds trust and should start with curiosity on the part of the healthcare provider. By asking about a family's cultural norms and access to healthy food, a collaborative plan will be more successful. A focus on increasing overall plant consumption will be better received if the plan honors the family's cultural culinary preferences.¹⁹⁻²¹

When addressing nutritional change, it is important to consider the Social Determinants of Health (SDOH). One in seven US children live in a household experiencing food insecurity and it is important for providers to be familiar with federal food programs such as Women, Infants, and Children (WIC) and the Supplemental Nutrition Assistance Program (SNAP), as well as to know local resources for less expensive produce and non-perishable items.²² WFPB nutrition is not necessarily more expensive.²³ Families often save money when they stop or limit the purchase of highly processed foods, sugary drinks and animal-based products.²⁴ Many plant-based options are quite inexpensive such as brown rice, legumes and frozen vegetables. Resources for supporting families who have limited access to healthy foods are helpful.²⁵⁻²⁷ ACLM offers an excellent [guide to WFPB eating on a budget](#), specifically designed for those served by WIC.

Set Healthy Goals



Example: I will (WHAT?) eat 5 fruits every day by (WHEN?) next month. I will do this by (HOW?) cutting fruits and leaving them in the fridge the night before.

SMART Goals

S- Specific



How I Eat

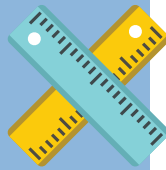
I will (WHAT?) _____

by (WHEN?) _____

I will do this by (HOW?) _____

Nutrition

M-Measurable



How I Sleep

I will (WHAT?) _____

by (WHEN?) _____

I will do this by (HOW?) _____

Sleep

A-Achievable



How I Move

I will (WHAT?) _____

by (WHEN?) _____

I will do this by (HOW?) _____

Physical Activity

R- Realistic



How I Stay Calm

I will (WHAT?) _____

by (WHEN?) _____

I will do this by (HOW?) _____

Mindfulness

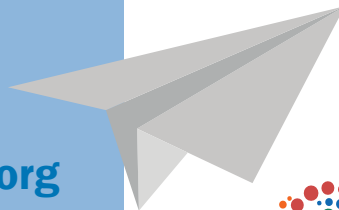
T- Timely



lifestylemedicine.org

Credit: Michelle Dalal MD, FAAP and Neeta Agarwal MD, FAAP

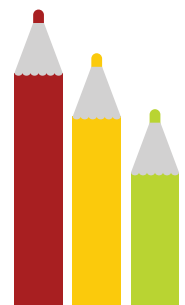
Recommended for use with school age children



This information is not to be used as medical or mental health advice. If you have a medical problem, are in pain, or feel very stressed, please talk to a trusted adult, counselor, doctor, or medical professional.



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PEDIATRIC & ADOLESCENT



7

TIPS FOR MINDFUL EATING

Controlling how you eat can be as important to your health as what you eat. Here are seven tips for eating mindfully, which has been shown to cause weight loss, reduce binge eating and improve a general sense of well-being.

3 Notice what is on your plate:

Not being aware of what you eat can lead to overeating and weight gain. Notice the colors, textures and amount of food on your plate. Pay attention to the food's smell, taste and feel as you eat.

4 Chew thoroughly:

Chew slowly, chewing each bite of food approximately 20 times. Enjoy the bursts of flavor in your mouth. Think about how the food makes you feel.

5 Eat slowly:

Enjoy what you eat and improve digestion by not rushing through your meal. Digestion begins with chewing, and chewing and swallowing are the only parts of the digestion process you can control.

2 Breathe and relax:

Sit comfortably, take a few deep breaths and take a moment to be thankful for the food you're about to eat. This prepares the body for the rest-and-digest phase.

STOP

6 Stop when you are full:

It takes the brain about 20 minutes to recognize that you've had enough—another good reason to not rush through your meal.

1 Prepare to eat:

Emotions are tied to eating, so try to recognize them and how they affect your food choices.

7 Make eating a separate activity:

Eating while working, reading or watching TV can cause you to overeat and make poor food choices. Treat eating as a part of your day when you can nourish not just your body but your mind and spirit. Consider it another form of meditation.

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Pillar 2: Physical Activity

Regular physical activity is beneficial for both physical and mental health throughout the lifespan. Physical activity includes aerobic, muscle and bone strengthening, flexibility, and balance.¹

For children in particular, outdoor play is essential for the development of motor, cognitive and social skills. Sadly, the US recently received an overall grade of D minus for physical activity in children, with only about 1 in 4 school age children and adolescents meeting the daily recommendation of 60 minutes or more per day.^{1,2,3,4}

An early emphasis on physical activity establishes healthy patterns as well as an opportunity for bonding with parents and/or caregivers. Parents serve as important role models and family-based interventions are the most effective means of implementing daily physical activity into the lives of children.⁵

An assessment of current level of activity is helpful to guide discussion and goals ([Appendix II Pre-Visit Family Survey](#)). For children who are not currently physically active, providers can recommend starting with as little as 2 minutes per day and increasing slowly.⁶ Non-weight bearing exercises, such as swimming or bike riding, can be a good starting point for those experiencing shortness of breath or musculoskeletal issues. Occasionally, a physical therapy referral may be helpful for patients struggling with activity due to weakness or physical discomfort.⁷

Accumulated physical activity spread throughout the day can be just as beneficial as continuous. A meta-analysis found there was no significant difference in cardiorespiratory fitness, blood pressures, insulin, or glucose levels between equivalent total durations of accumulated and continuous exercise.⁸



REDUCING SEDENTARY BEHAVIOR

Sedentary behavior increased during the COVID-19 pandemic as school and activities were replaced with screen time. Sedentary behavior is an important modifiable risk factor for all-cause mortality and is strongly linked to risk factors for cardiovascular disease such as obesity, hypertension, cortisol dysregulation and insulin resistance.^{9,10}

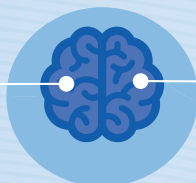
“I’M BORED!” How many times have you heard this from your patients or your own children? Boredom can help children develop new skills, expand their creativity and increase their self-esteem. Boredom is also a great opportunity to foster physical activity. The Child-Mind Institute suggests sitting down with kids and developing an activity chart that can be accessed when needed. Ideas can include such activities as a nature hunt, building a fort, starting a garden or other outdoor project, or learning dance moves.^{2,4,11}

Health Benefits of Physical Activity

FOR CHILDREN

Academic Performance

Improves attention and memory



Brain Health

Reduces risk of depression

Muscular Fitness

Builds strong muscles and endurance



Heart and Lung Health

Improves blood pressure and aerobic fitness

Cardiometabolic Health

Helps maintain normal blood sugar levels



Long-term Health

Reduces risk of several chronic diseases, including type 2 diabetes and obesity



Healthy Weight

Helps regulate body weight and reduce body fat

Bone Strength

Strengthens bones



Source: *Physical Activity Guidelines for Americans*, 2nd edition

To learn more, visit: <https://www.cdc.gov/physicalactivity/basics/adults/health-benefits-of-physical-activity-for-children.html>

October 2021

MAKING IT WORK

There is no single formula for how to incorporate physical activity into a child or adolescent’s life. Activity should be tailored to fit the unique interests of each individual, and it should be FUN! Making incremental changes to replace sedentary time with daily physical activity allows for improved levels of cardiorespiratory fitness to prevent chronic disease.

FITT Goals are a good option for setting physical fitness goals. FITT stands for frequency, intensity, time and type.

EXAMPLE	
(F)	Frequency: 3 times a week
(I)	Intensity: Able to talk but not sing
(T)	Time: For 30 minutes
(T)	Type: Walking







RECOMMENDATIONS FOR SCHOOL AGE CHILDREN AND ADOLESCENTS ¹²

- 60 minutes a day of mainly moderate-intensity activity
- 3 days a week include vigorous intensity
- 3 days a week include muscle- and bone-strengthening
- Exergaming at home offers an alternative option to traditional methods of physical activity.¹³

TALK TEST

www.livelifghter.com.au

Use the Talk Test to determine your physical activity intensity.

Exercise intensity	Talk level	Examples
Light 	Normal breathing rate – can sing or talk	Slow walking Stretching Light housework 
Moderate 	Breathing getting faster – can carry a conversation but not sing	Brisk walking Cricket  Leisurely swimming
Vigorous 	Gasping for breath – can’t hold a conversation	Jogging Soccer Dancing 

Source: [pa-resource_talk-test-wallet-card.pdf](#) (livelifghter.com.au)

COMMUNITY ADVOCACY OPPORTUNITIES

The American Academy of Pediatrics (AAP) encourages pediatricians to advocate for increased access to physical activity for children at school, home, in the community and anywhere kids live, learn and play.⁶ Some ideas include:

- Walkingschoolbus.org A walking school bus is a group of children walking to school with one or more adults.
- Walkwithadoc.org Free physician-led walking groups that begin with a brief discussion on a current health topic.
- Increased recess time or other activity breaks built into the school day
- Standing desks in schools are an effective way to enhance memory and focus
- Increasing access to parks and improving sidewalks (check with your local city council)

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Pillar 3: Restorative Sleep

It is important that obesity counseling moves beyond nutrition and physical activity. Restorative sleep, for example, is essential to health.^{1,2} Studies have confirmed across all ages the associations between inadequate sleep and the increased risk of obesity.³⁻¹⁰ One study demonstrated that preschool-aged children with early weekday bedtimes were half as likely as those with late bedtimes to be obese in adolescence.¹¹ Bedtimes are a modifiable routine that may help to prevent obesity!

Sleep deprivation and sleep disorders contribute to obesity by:

- Decreasing leptin (the satiety-inducing hormone) and increasing ghrelin (the appetite-stimulating hormone) leading to increase in hunger and craving for food rich in fat and carbohydrates^{1,12-14}
- Compromising insulin sensitivity due to alteration in circadian rhythms, leading to development of type 2 diabetes and metabolic syndrome.^{15,16}
- Decreasing physical activity and increasing screen time.^{6,14,17}

- Increasing caloric intake due to more wake time, specifically more snacking and fast-food consumption during the night.^{3,17,18}
- Increasing problems with attention, behavior, learning and psychological well-being, leading to increased risk of accidents, injuries, self-harm.¹⁹

In puberty a natural shift occurs in the timing of the body's circadian clock, causing most teens to have a biological preference for a late-night bedtime. There are ongoing advocacy efforts to implement later start times (8:30 am or later) in middle and high school, allowing teens to get the healthy sleep they need to be successful.²⁰

SLEEP-RELATED BREATHING DISORDERS

BMI \geq 85th percentile is a risk factor for development of pediatric sleep-related breathing disorders, including obstructive sleep apnea (OSA). OSA in children is characterized by recurrent episodes of partial or complete upper airway obstruction associated with arousals, awakenings, and/or oxyhemoglobin desaturations during sleep.²¹ It may also be associated with disruption of ventilation and normal sleep patterns.²²

IN CHILDREN, OSA CAN LOOK LIKE:

- Gasps/snorting noises/observed episodes of apnea
- Behavioral issues
- Bedwetting
- Daytime somnolence
- Learning difficulties
- Inattention
- Hypertension
- Headaches
- Nighttime snoring

For children with regular snoring (>4 days/week) for longer than 2 months and BMI \geq 95th percentile, a sleep study is recommended.

If BMI <95th percentile, assess tonsillar size on physical exam and decide on sleep study versus referral to Otolaryngology. (American Academy of Pediatrics,²³ American Academy of Sleep Medicine,²⁴ American Academy of Otolaryngology-Head and Neck Surgery²⁵)

AN OVERVIEW OF THE MECHANISMS THAT AFFECT SLEEP

Master circadian clock or Suprachiasmatic Nucleus

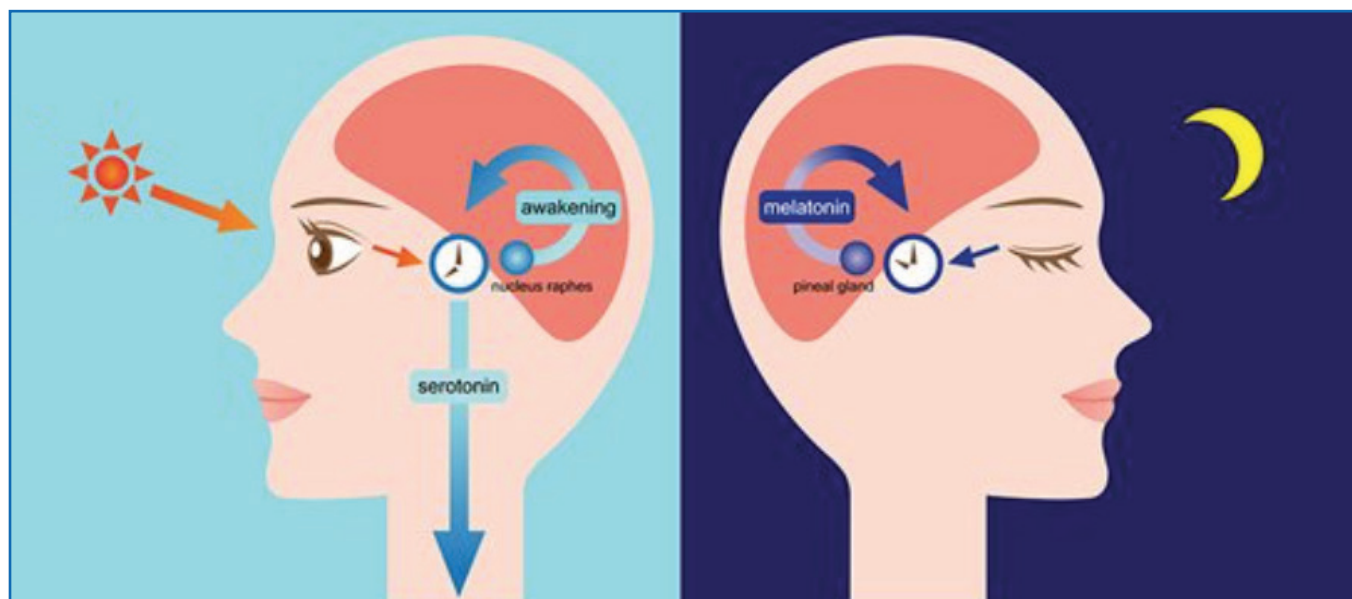
(SCN) sits in the hypothalamus and communicates/signals throughout the brain and rest of body. Light resets the circadian clock and is the most reliable and primary source for synchronization of the brain.^{15,16}

The Circadian Rhythm is about 24 hours long and determines:

- Wake and sleep patterns
- Mood/Emotions
- Eating and drinking
- Hormonal processes

- **Circadian Rhythm** coordinates the body's core temperature which lowers near bedtime, helping to initiate sleep.
- **Serotonin** and **Dopamine** promote waking.
- **Endogenous Melatonin** signals a biological command to go to sleep. With decreased light (dusk), the SCN signals release of melatonin from the pineal gland into our bloodstream. With increased light (dawn), the release of melatonin decreases to undetectable levels by mid-morning.

- Melatonin provides an official instruction to initiate sleep but does not directly assist sleep. Thus, melatonin supplementation is NOT a powerful sleeping aid for those who are healthy and non-jet lagged, but it does have a significant placebo effect. Keep in mind that commercial melatonin is poorly regulated and over-the-counter brands can range between 83% less than concentration claimed on the label to >478% more than what is claimed.²⁶ Additionally, the rates of pediatric melatonin overdoses have increased by over 530% in the last decade.²⁷



Source: <https://tygonlyte.com/treatments/mood-management-sad/>

- **Sleep-wake homeostasis or “Sleep Pressure”** is the driver that impacts how long and how deeply we sleep. Sleep pressure builds during the day when we are awake and decreases during sleep.
 - **Adenosine** plays a key role in turning down the “wake-promoting” regions of the brain and turning up the “sleep-inducing” regions.
 - Adenosine builds gradually in our bodies while we are awake.
 - When adenosine concentrations peak, we feel an irresistible urge to sleep.
 - Adenosine levels drop back down after about 8 hours of sleep.
- **Caffeine** is the most widely used (and abused) drug in the world. Caffeine is also the only addictive substance that is legal and easily available to children and teens. Think of the list of highly caffeinated energy drinks, with flashy colors and appealing taste. They are high in sugar and directly marketed to young people.
 - Caffeine works by competing with the adenosine brain receptors, blocking the sleep signal. Caffeine levels peak around 30 minutes after oral intake, with a half-life of 5-7 hours.



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Pillar 4: Stress Reduction

Stress reflects an individual’s response to their environment, triggering the parasympathetic and sympathetic nervous systems, and leading to a cascade of changes which can be linked to obesity and other

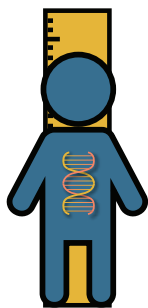
physical and mental health conditions. Both acute and chronic stress cause these changes. Obesity itself can be a stressful state due to the high prevalence of weight stigma.

STRESS, ACES, AND THE SOCIAL DETERMINANTS OF HEALTH

We underestimate the complex relationship between obesity and trauma/adverse childhood experiences (ACEs) and obesity and the social determinants of health (SDOH).^{1,2} These issues extend beyond habits and emotional eating.^{1,3}

- Maternal obesity and chronic stress in pregnancy can cause gene dysregulation in children; changing the microbiome, increasing inflammation, cortisol and body fat.^{1,4,5}

EPIGENETICS EXPLAINS HOW EARLY EXPERIENCES CAN HAVE LIFELONG IMPACTS.



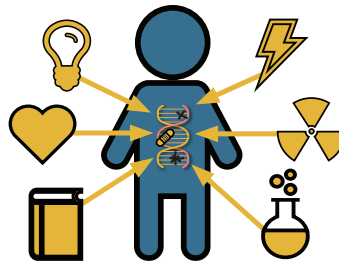
The genes children inherit from their biological parents provide information that guides their development. For example, how tall they could eventually become or the kind of temperament they could have.



When **EXPERIENCES** during development rearrange the epigenetic marks that govern gene expression, they can change whether and how genes release the information they carry.



Thus, the epigenome can be affected by positive experiences, such as supportive relationships and opportunities for learning...



... or negative influences, such as environmental toxins or stressful life circumstances ...

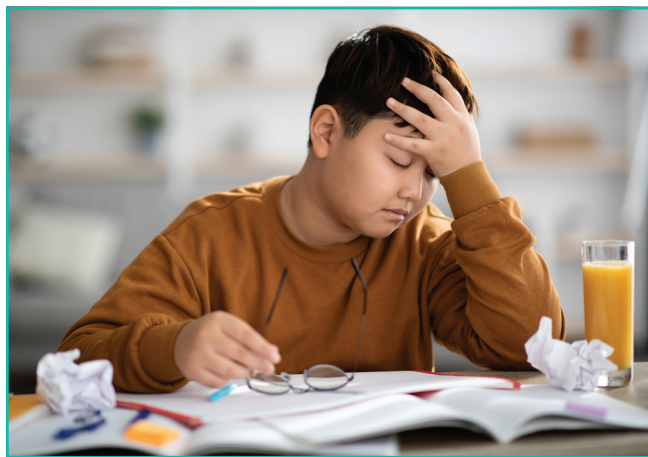
... which leave a unique epigenetic “signature” on the genes. These signatures can be temporary or permanent and both types affect how easily the genes are switched on or off. Recent research demonstrates that there may be ways to reverse certain negative changes and restore healthy functioning. But the very best strategy is to support responsive relationships and reduce stress to build strong brains from the beginning.

YOUNG BRAINS ARE PARTICULARLY SENSITIVE

Source: <https://developingchild.harvard.edu/epigenetics>

- With ACEs, developing brains and the neuroendocrine system are affected.^{4,5}
- Food scarcity is associated with hoarding and overeating.⁶
- Children with neurodevelopmental delays are at greater risk for overweight/obesity if they have the risk factors of poverty and ACEs.⁴
- Physiological changes can lead to overeating, cravings for foods high in calories, fat, or sugar, disrupted sleep and decreased desire for physical activity.

Epigenetics focuses on this complex interplay between our genes and our environmental triggers.⁵



HOW DOES STRESS AFFECT THE BODY AND LEAD TO OBESITY? ^{4,7}

- Triggers changes in the hypothalamic-pituitary-adrenal axis which raises cortisol release, increases insulin resistance and alters satiety.
- Triggers changes in reward processing, executive functioning and self-regulation in the brain which impacts appetite control and planning.
- Stimulates production of biochemical hormones and peptides such as leptin, ghrelin, and neuropeptide Y, impacting appetite control.

If stress is the family's primary concern, then the priority of the visit should shift to this pillar of lifestyle medicine. Addressing stress in the context of obesity highlights the synergy of the lifestyle medicine pillars for the management and treatment of chronic disease.

ASSESSMENT

A lifestyle medicine approach to obesity should include an assessment of stress at the initial visits and follow-up as needed. Screening Questionnaires can be used or open-ended questions about current or past life stressors.⁸ [The Pre-Visit Family Survey](#) (Appendix II) includes a brief assessment of stress. Below are some examples of more detailed parent and child screeners for stress and trauma:

- Parental Stress Survey⁹
- Child Stress Survey¹⁰
- Adverse Childhood Experiences Screening Tool¹¹
- Brief Resilience Scale¹²

If stress is determined to be impacting the child's health, addressing this may be the first priority including referral to a mental health provider if needed. Below are tools that providers may find useful for professional education and to support patients.

[Resources for Providers](#) (Patient Resources including free apps available in Appendix VI)

A. “Mindful Minis” can be taught in the office:

A mindful mini is a brief relaxation technique used to calm oneself in the moment. This can help clinician workday stress also! Suggest that the patient/family use these during their day to both prevent and alleviate stress. Example:

In a soothing voice, the clinician asks the parent and child to sit comfortably with their feet on the ground, hands on their laps relaxed. If they are comfortable, they can close their eyes.

Ask the patient/family member to notice the air slowly entering their nose and gently filling their lungs. Have them notice this for four breaths in a row, and then gently bring their attention back to the room.

B. The Benson Henry Institute for Mind Body Medicine at Mass General Hospital provides training in stress management & resiliency <https://bensonhenryinstitute.org/>

C. Dr. Kenneth Ginsburg’s 7 C’s of Resilience (Competence, Confidence, Connection, Character, Contribution, Coping, Control). <http://www.fosteringresilience.com/about.php>

D. The American Institute of Stress www.stress.org

E. Free Apps for patients, caregivers, and clinicians <https://www.mindful.org/free-mindfulness-apps-worthy-of-your-attention/>

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Pillar 5: Avoiding Risky Substances

Obesity has been linked with stress and poor mental health which sometimes leads to unhealthy coping mechanisms such as use or abuse of illicit substances including alcohol, nicotine or marijuana.^{1,2}

It is important to ensure that children, particularly teens, who present with a high BMI and comorbid risks are screened for anxiety, depression and substance use concerns using validated tools.³ [ACLM has a comprehensive toolkit](#) on adolescent mental health for further information.

If substance use is the family's primary concern, then the priority of the visit should shift to this pillar of lifestyle medicine. Addressing substance use in the context of obesity highlights the synergy of the lifestyle medicine pillars for the management and treatment of chronic disease. Patients or parents who are engaging in substance use as an unhealthy coping mechanism should be treated in a non-stigmatizing and non-judgmental manner to identify reasons for substance use and identify ways to stop substance use.

It can be helpful to refer to specific resources to help with challenges patients may be facing with substance use.

THE 5 A'S CAN BE USED IN ASSESSING SUBSTANCE USE⁴

- **A- Ask if using**
- **A- Advise to STOP**
- **A- Assess if ready to quit and set a quit date**
- **A- Assist with additional substance cessation resources**
- **A- Arrange follow-up**

Some helpful resources include:

- Tobacco Quitline 1-800-QUIT-NOW
- American Addiction Centers 1-877-586-4220
- Alcoholics' Anonymous aa.org, 800-839-1686
- Al-Anon (for family of alcoholic)
- Alateen (peer support group for teens)
- Substance Abuse and Mental Health Services Administration (SAMHSA) National Helpline at 1-800-662-HELP (4357)⁵

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Pillar 6: Social Connection

As human beings we intuitively understand the power of social connection, and this is supported by an accumulating body of robust evidence. Connection and nurturing from the earliest age have a profound effect on both physical and mental health and child development.¹ Social connection (belonging) and love are fundamental human needs influencing our physical, emotional and mental health.²



Relationships are the agents of change and the most powerful therapy is human love.

*- Dr. Bruce Perry,
Child Psychiatrist and Neuroscientist*



The physical and emotional benefits of social connection are numerous. A 75-year cohort study concluded that the single most important predictor of happiness and longevity is having social connections.^{3,4} However, the reverse is also true.⁵ For example, in adolescence, social isolation increased the risk of inflammation by the same magnitude as physical inactivity.⁶ Lack of social connection has been shown to be a greater detriment to health than obesity, smoking and high blood pressure.⁷

Children with obesity in late childhood and adolescence are at increased risk of social exclusion and loneliness due to factors including weight bias and social norms of ideal body size.⁸ The Center for Study of Social Policy (CSSP) identifies social connection as one of 5 Protective and Promotive Factors that mitigate risk and promote well-being in children between the ages of 9 and 26 years old.^{9,10}

A PROVIDER'S ROLE

A comprehensive approach to obesity includes questions about friends, school, and bullying. Inquiring about the quantity and quality of social interactions gives vital health information. If concerns are expressed about social isolation or bullying, ask permission to learn more. Help families problem-solve and refer early for counseling and support if needed.¹¹⁻¹⁴ It is important to counsel parents on bonding with their infants, playing with their children, teaching them about friendships, and finding places of social connection. Consider writing a prescription for social connection!¹⁵ If bullying is a concern, consider how the child and/or parents can advocate for the situation. There are many excellent resources on bullying, including on healthychildren.org and stopbullying.gov.^{12,16}

BENEFITS OF SOCIAL CONNECTION⁷

- maintain a healthy body mass index
- improve cancer survival
- decrease depressive symptoms
- mitigate posttraumatic stress disorder symptoms
- control blood sugar
- decrease cardiovascular mortality
- improve overall mental health

COUNSELING SOCIAL CONNECTION

Here are some key points to discuss while counseling families in the office setting.

- Family mealtimes have numerous social and emotional benefits^{7,17}
- Parents can practice being fully present while listening to their child and asking reflective statements, so they feel heard
- Physical activity is a great way to build connection with family and friends
- Parents can encourage children to seek friends who are making healthy choices



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Part 3: Handouts for Patients and Families

A Lifestyle Medicine Approach To Building Healthy Habits In Childhood

Common Challenges For Families Making Healthy Nutritional Changes

Lifestyle Activity For School-Aged Kids And Teens

Lifestyle Sleep Health for Kids and Teens

Good Night, Sleepy Head! Tips For A Good Night's Rest

How Parents Can Help To Manage Childhood Stress

Social Connection Starts At Home

A Passport To Healthy Eating

Common Tests Your Doctor May Order



A Lifestyle Medicine Approach to Building Healthy Habits in Childhood

NUTRITION

- Eating a predominately whole food plant-based (WFPB) diet *which maximizes* minimally processed vegetables, fruits, whole grains, legumes, nuts and seeds.
- A WFPB diet *minimizes* highly processed foods and refined carbohydrates, salt and sugar, fats and oils, meat and dairy.

PHYSICAL ACTIVITY

- Aim for at least 60 minutes of physical activity per day.
- Muscle strengthening and bone strengthening exercises should be included at least 3 times per week during these 60 minutes.
- For 12-year-olds and older, add strength training with supervision.
- Organized team sports are great, however, playing in the backyard or local park with friends or caregivers does the trick as well!
- Activity does not need to be continuous - playing tag, jumping rope, bike riding, soccer, baseball, basketball, dance, gymnastics and walking to school add up!
- Exergaming at home offers an alternative option to traditional methods of physical activity.

SOCIAL CONNECTIONS

- Develop healthy, positive relationships.
- Connecting with people who have healthy habits may make it more likely for you to have healthy habits and vice versa.
- Seek professional help such as counseling if you are struggling with mood or relationships.

SLEEP

- Learn to wake up every day at the same time, including weekends.
- Plan ahead to go to bed at around the same time each night.
- Look around your room. What can you change to improve your sleep?
- Learn how to relax and leave the worries of today or tomorrow “on the bedside table.”
- Try mindfulness and/or meditation during the day. Mindfulness means to focus your awareness on the present moment and accept your feelings, thoughts, and how your body feels. Meditation is the practice of training in awareness to get a healthier perspective.

STRESS MANAGEMENT

- Find ways to manage stress and calm the mind such as physical activity, mindfulness, meditation, yoga.
- Apps may be helpful such as Mindshift, Calm, Headspace and Stop, Breathe, Think Kids.

Common Challenges for Families Making Healthy Nutritional Changes

We are a busy family! We don't have time to eat dinner together. We often pick up fast food. This is the reality for many families in our fast-paced world. First, give yourself grace! Then, consider putting family dinner night on the calendar. Give it the same importance you would other meetings and activities. Consider adding a fun theme or pairing it with an activity like game night or outdoor play. If you must eat on the go, prepare simple cold meals in advance (examples are in next question). Children can also help with meal planning and preparation. For healthy tips when dining out <https://www.eatright.org/health/wellness/fad-diets/7-tips-for-healthy-dining-out>

I don't have time to cook healthy meals.

This is another reality for many families. Remember a meal doesn't have to require a stovetop or oven. Whole fruit, chopped veggies or a salad, nuts or beans, and a grain on the side are a few examples of cold items from pantry staples that you can mix and match. Consider eating 'tapas' style - small servings of a variety of foods can really be a fun change!

Cooking healthy meals is expensive. Groceries can add up for a family. Shop in season and consider frozen or canned as an alternative to fresh fruits and veggies in winter months. Beans in a bag or can are not expensive. (With cans, remember to rinse off salt/sugar liquids or buy salt free). Consider simple switches, such as changing white rice/bread/pasta to a brown or whole grain variety.

I used to buy fresh fruits and vegetables but no one in my family would eat them. It is frustrating when food is wasted. Think about what foods you can remove (i.e., candy, cookies, chips) while you

are adding healthy options. Keep fruits and veggies in plain sight, washed and prepared for younger children. Offer fruits and vegetables for snacks and at meal times. Include children in grocery shopping and food preparation when possible. Stay consistent with your changes and the family will adjust to the new healthier options.

I cook healthy meals, but my partner brings home junk food/fast food/treats/soda.

This is tricky! Food has a strong connection with memories and emotions. Talk about what triggers fast food stops. Is it only for convenience? Is it a way to reward, celebrate or show affection? Explore different ways to meet these needs. You can also encourage your partner to attend medical appointments in person or virtually to learn more about healthy lifestyle changes. If they still can't attend, share what you are learning.

The caregiver/grandparent thinks my child needs to eat more/gain weight.

This is also common to many households and sometimes linked to generational and/or cultural differences. If your doctor has told you your child's weight is normal, then you can reassure the person who is concerned. Keep the conversation focused on good health, not outward appearance. Share your goals of nutritional change and how you hope to work together on those goals. You may need to plan to provide healthy alternative foods or meals when your child is at this caregiver's home. Finally, with an older child or teen, the knowledge they learn about healthy eating will help them navigate situations just like this. Have faith in their increasing ability to make healthy choices!

I recently learned that my child has the condition of overweight (or obesity) yet they hardly eat a thing at meal times.

They may be eating the bulk of their calories between meals – sugar sweetened beverages, candy, and unhealthy snacks can fill them up and lower their appetite for meals. Remember to provide healthy, unprocessed snacks. In general, avoid any snacks for 1-2 hours prior to a scheduled mealtime. Children may “hold out” for a less healthy option by not eating the healthy dinner provided. With consistency, if only healthy options are available, and they are hungry at mealtime, this will improve.

My toddler eats what the older children eat, but we don't want them to eat junk food at such an early age!

While certain privileges come with age and developmental stage, it's tough to make the argument that older siblings “get” to eat junk food. Change can be hard, but consider making gradual changes using goals that work for the whole family. Remember not to single out a particular child for healthy changes. The whole family will benefit from making the same healthy changes.

My child is a picky eater. I (or my partner) am, too, so it's likely 'in their genes'.

Often picky eating is related to family patterns or may be learned from the environment. It may be hard for adults to change behaviors, but still try to offer a variety of foods, especially fruits and vegetables, from the beginning. There is a magical window between the ages of 6 months and 4-6 years old where children can learn to love many tastes and textures. Encourage them to sample new foods prepared in different ways (i.e. raw and crunchy vs. steamed and soft). Don't forget it may take up to 20 times before a person determines if they truly like or dislike a food. Talk with your child about the qualities of the food - color, crunch, smooth. Enjoy the journey!

My child hates all vegetables. It's hopeless!

This may seem to be reality, especially when it's said repeatedly. When asked, most 'vegetable-hating

children' will surprisingly list 2-3 vegetables that they actually don't mind and may possibly even enjoy! It is ok to make those favorites repeating acts in your weekly menu. Try adding a new fruit or vegetable every week or so to continue to expand their taste preferences. When they do express disgust about a food, downplay it by staying “neutral” (not reacting strongly) and never force a child to eat.

My child hates fruits and veggies so I have to sneak them into sauces and smoothies.

Kudos for your determination! While it is better to include any fruits and veggies rather than none, remember to continue to offer whole foods that offer fiber that is important for gut health. Also, pureeing foods is a less practical solution in the long run!

I don't want my child to go hungry. If they don't eat enough at lunch or dinner, I'll give them a shake/supplement.

When children don't eat, parents often feel anxiety and worry about their health. Speak to your health care provider about your child's growth and health to determine if any supplement is needed. Recognize that the habit of having a shake after might be what is sabotaging meals.

My child won't drink water if it doesn't have any flavor.

This is the very reason why toddlers need to be introduced to drinking plain water after 6 months of age, or when a health care provider advises. If an older child or teen has grown accustomed to drinking sugar-sweetened (or artificially sweetened) drinks, you might consider flavoring the water naturally with slices of fruits or veggies (like cucumbers). At some point, removing or limiting those sweet beverages from the home may be what is needed.

Lifestyle Activity for School-Aged Kids and Teens

As a parent or caregiver, create opportunities for children and adolescents to be the healthiest version of themselves!

How much? How often?
60 minutes per day (all at once or spread throughout the day)¹

WHAT KINDS OF EXERCISE?		
<p>Moderate to vigorous aerobic activity should be the focus of daily exercise (don't forget to stretch)</p>	<p>Include muscle and bone strengthening exercises at least 3 times per week during these 60 minutes</p>	<p>>12 years old: add in weight training 2-3 times per week on non-consecutive days</p>
<ul style="list-style-type: none"> • playing tag • flag football • walking to school • riding bikes • soccer, baseball, basketball, gymnastics, swimming, tennis, dance • martial arts 	<ul style="list-style-type: none"> • climbing on playground equipment, create "ninja warrior" courses • hopping, skipping, jumping rope, running • resistance exercises= using own body weight, resistance bands 	<ul style="list-style-type: none"> • pull-ups • push-ups • planks • weights (under supervision)
<p>1. How much physical activity do children need? Centers for Disease Control and Prevention. Last edited June 3, 2022, retrieved September 1, 2022. https://www.cdc.gov/physicalactivity/basics/children/index.htm</p> <p>2. Murphy, M.H., Lahart, I, Carlin, A., Murtagh, E (2019). The effects of continuous compared to accumulate exercise on health: A meta-analytic review. <i>Sports Medicine</i>, 49, 1585-1607. https://doi.org/10.1007/s40279-019-01145-2</p> <p>3. Staiano A, Beyl R, Guan W et al (2018). Home-based exergaming among children with overweight and obesity: A randomized clinical trial. <i>Pediatric Obesity</i>, 13(11), 724–733. https://doi.org/10.1111/ijpo.12438</p>		

TAILOR THIS ROUTINE TO FIT YOUR CHILD/TEEN

Talk to your child's provider for recommendations specific to your child's health needs.

If your child is new to incorporating exercise into the day, work up to the goal of 60 minutes per day starting in small increments spread throughout the day.² Incorporate exercise into the daily routine (no gym equipment needed) and make it FUN! Invite family and friends to join in.

USING TECHNOLOGY FOR GOOD

YouTube offers a variety of free at-home workouts for both kids and their families to do together. You can find free online exercise classes through a variety of organizations, such as Duke Recreation and Physical Education, which offers kickboxing, yoga, Zumba/hip hop, muscle pump and Pilates—to name a few! Exergaming at home offers an alternative option to traditional methods of physical activity.³

Lifestyle Sleep Health for Kids and Teens

Children who sleep the recommended number of hours find that it helps their bodies and minds perform at their best. Sleep recharges our body and “cleanses” our brain. Sleeping makes it easier to:

- Concentrate, learn and improve memory
- Perform better at sports
- Be more creative
- Stay healthy
- Be happier
- Eat healthier!

Recommendations for Optimal Health

Infants 4 months to 12 months:
12 to 16 hours per 24 hours

Children 1 to 2 years of age:
11 to 14 hours per 24 hours (including naps)

Children 3 to 5 years of age:
10 to 13 hours per 24 hours (including naps)

Teenagers 13 to 18 years of age:
8 to 10 hours per 24 hours

Adults:
7-9 hours of sleep per 24 hours

SLEEP DISRUPTORS

- Too much food or drink close to sleep time
- Blue light from phone/computer/television screen
- Lack of daytime sunlight exposure
- Medications and medical conditions
- Caffeine or alcohol use
- Stress/anxiety/worry
- Certain noises/sounds
- Temperature (too hot/too cold)

TIPS FOR BETTER SLEEP

- Establish regular sleep schedule (same sleep and wake times 7 days a week)
- Minimize/eliminate bedroom noise and lights
 - Turn off electronics 1 hour prior to bedtime and no televisions, computers or phones in the bedroom
 - Close blinds/curtains
 - White noise (like a fan or electronic sound machine) can be soothing
- Increase daytime exposure to sunlight
- Move at least every hour during the day
- Eliminate nighttime/limit daytime caffeine
- Eliminate/limit after-dinner and late-night snacking
- Maintain a healthy BMI
- Stay hydrated during the day
- Relax with meditation, prayer, reading, journaling, deep breathing



GET UP AT THE SAME TIME



EVENING WALKS



BEDTIME ROUTINE



COMFORTABLE BED



COOL AND DARK ROOM



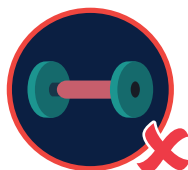
RELAXING BATH



HEAVY FOOD



BLUE LIGHT



HARD TRAINING



ALCOHOL, SMOKING



CAFFEINE



STRESS

Good Night, Sleepy Head!

Tips for a Good Night's Rest

- **Learn to wake up every day at the same time, including weekends.**
- **Go to bed at around the same time each night, including weekends. Aim for at least 8 hours of sleep** each night. Ideally 9 to 10 hours is best.
- **Look around your room** to see what you can change to improve your sleep:
 - Block the light from the outside or on clocks and remove electronic devices
 - Make the room cool by using fans or lowering the thermostat
 - Use white noise as an aid. Concentrate on the sound of a fan or sound machine
- **Learn how to relax** and leave the worries of today or tomorrow “on the bedside table”.
- **Try mindfulness and/or meditation during the day.** Mindfulness means to focus your awareness on the present moment and accept your feelings, thoughts, and how your body feels. Meditation is the practice of training in awareness to gain a healthier perspective.
- **Have a shower or hot bath before bed** to help regulate body temperature
- **Follow a bedtime routine.** For example, brush teeth, wash face, get things ready for the next morning, read, etc. Eventually you will associate these activities with getting ready for sleep.
- **Go outside** soon after waking up. Sun exposure in the morning helps with better sleep at night.
- **Eat a nutritious breakfast** each morning close to the time you wake up (no added sugars, minimally or not processed. Think fresh fruits, oats, smoothies sweetened with fruits).

STILL CAN'T SLEEP?

- Be patient and give yourself a pat on the back! You are trying and that alone is fantastic! It takes practice for your body to be trained into this wonderful new world of slumber.
- If 20 to 30 minutes have passed, get out of bed but do not turn on the TV, phone, computer, or ANY bright lights. Try reading, drawing, writing, or composing the next hit.
- Plan ahead! One hour prior to bedtime turn OFF electronics. The melatonin your body produces gets confused when light (such as blue light from electronics) enters your eyes.
 - If you own a cell phone, set “Do not disturb” 1 hour prior to bedtime.
 - You can show your friends that you’re in charge of your time by giving them a heads up that you will be off-line “from this time until this time”.
 - Find a safe spot to charge your phone overnight that is not inside your room.

Note to parents: The importance of sleep is often underestimated yet it’s one of the best tools to promote health. In children it is even *more* important due to the impact on their developing brains. Insufficient sleep has been linked to aggression, school problems, behavioral problems, addictive substance use, and suicide. On the other hand, children who are provided with consistent amounts of sleep experience the benefits well into adulthood.

Children learn by example and their parents/caregivers are their most important teachers. Challenge yourself to look deeper into the benefits that sleep provides for you too - not only to show your children good habits, but to gift them with your long and healthy life!

How Parents Can Help to Manage Childhood Stress

As a parent you have undoubtedly experienced stress! You know the feeling - your heart pounds faster, muscles tighten, breath quickens, and your senses become sharper. These physical changes increase your strength and stamina, speed up your reaction time, and enhance your focus—preparing you to either fight or flee from the danger at hand.

Short term stress can sometimes serve a useful purpose, but chronic stress can harm us. Experiencing chronic

stress can cause physical problems such as headaches, high blood pressure, heart problems, diabetes, skin conditions, asthma, arthritis, depression, anxiety, and can lead to weight gain. Chronic stress lowers our pain threshold and can make our aches and pains feel worse.

We tend to think that children have carefree lives and that things are easy for them, but did you know that children can feel stress also?



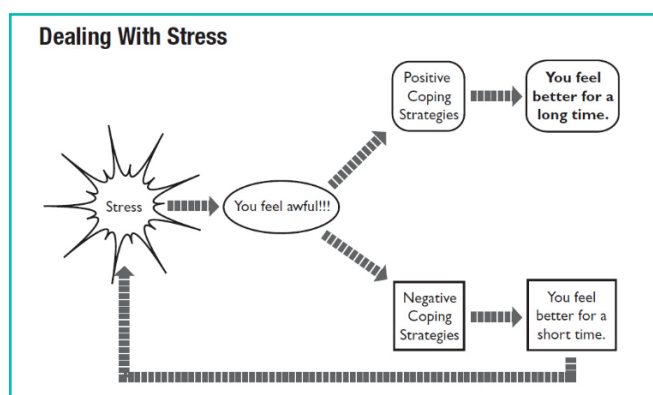
Stress in children can manifest as changes in their typical behavior. Each age/stage may show this differently.

Toddlers/Pre-K (2–5-year-olds)	Often show stress in physical ways and will complain of stomachaches or headaches.
School-aged (6–10-year-olds)	May express their stress as worries and show their fears as anger or irritability. Sometimes, they might use negative self-talk such as “I’m dumb,” or “nothing is fun anymore.” They may act differently in different settings, such as seeming fine at home but acting out at school.
Tweens (10–13-year-olds)	May show some of the same signs as younger children, may also be less likely to talk about their worries and fears. (This doesn’t mean they aren’t there.)
Teenagers	Can show any of the symptoms from the younger years, or may have irritability, sleep all day and stay up all night, break rules/curfew, or have a sense of helplessness and hopelessness as well as anxiety.

Often children (and adults) will turn to quick & easy ways to relieve their stress, distract or numb themselves. Many times, these ways of coping are not healthy.

NEGATIVE COPING STRATEGIES INCLUDE

Yelling, fighting, procrastinating, skipping school, ignoring/denying emotions, withdrawing socially, unhealthy eating (over-eating or overly restrictive eating), self-harm (such as cutting), joining a gang, running away, high-risk sexual activity, and using cigarettes, alcohol, or other drugs.



Source: *Building Resilience in Children and Teens: Giving Kids Roots and Wings*, 3rd Edition (Copyright © 2015 Kenneth R. Ginsburg, MD, MS Ed, FAAP, and Martha M. Jablow)

POSITIVE COPING STRATEGIES INCLUDE

- Taking a break from stressful situations to focus on a hobby or being active.
- Getting enough sleep to feel ready for the day.
- Helping young children find a special blanket or stuffed animal that soothes them.
- Using deep breathing and guided meditations.
- Gently tensing and relaxing individual muscles.
- Using the five senses to become “in the moment” (what do you see, hear, smell, taste, or feel) to bring awareness and calm.



VISION



HEARING



SMELL



TASTE



TOUCH

- Going outside in nature (even standing outside & noticing the wind, hearing the birds, etc.).
- Journaling (with words or with pictures) to express feelings.
- Connecting with a friend or family member.

PARENT TIPS

Teach children to label their emotions & notice how their body feels. Ask questions & really listen to their answers.

- Try to “notice out loud” what you hear them describe (such as “you are still frustrated that you didn’t make that goal”).
- Ask them to notice their body cues (heart rate increase, muscles tense, breathing harder, nausea, headache) and label that as stress.
- Then, suggest to your child one of the positive coping strategies listed above.
- Teach children to identify at least one adult they can trust with their feelings.
- Model the positive coping strategies when you are feeling stressed too.

PARENT RESOURCES

- <https://parenting.firstcry.com/articles/hobbies-for-kids-discover-amazing-ideas-for-your-childs-interest/>
- <https://www.purewow.com/family/hobbies-for-kids>
- <https://www.anahana.com/en/meditation/meditation-for-kids>
- <https://www.teachstarter.com/us/blog/classroom-mindfulness-activities-for-children-us/>

Social Connection Starts at Home

You are your child's first teacher and role model. From birth, cuddling with your baby and talking with him or her is important for their physical and emotional health and development. Your child needs connection with you. No one is a perfect parent, but it is important to be a safe and loving parent. Find times to bond with your child and it will help them for their entire life. As children grow, social connection with friends is important for their health and well-being.

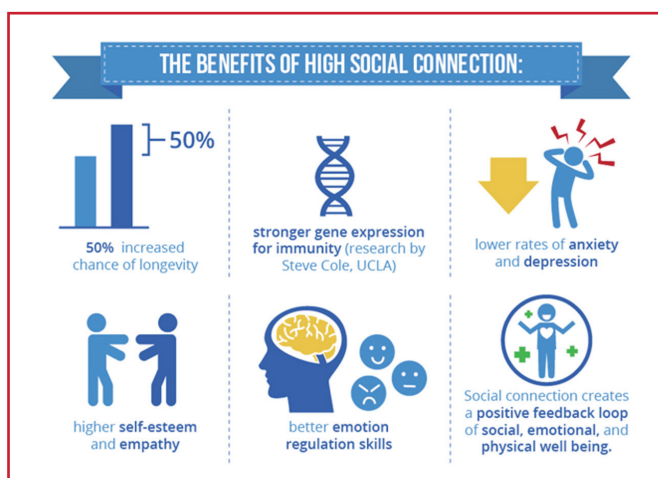
Mealtimes are proven in research studies to be an important way to build social connections with children and teenagers.^{1,2} During meals, turn off the TV and put away the cell phones. Have fun with each other, talking and asking questions. Consider making a little jar of conversation starters (many are available free online).

- “What was your ‘rose and thorn’ today?” (best and worst thing that happened today)
- “If you won 1 million dollars, what would you do with the money?”
- “If you could be an animal, what would you be and why?”
- “What is your favorite thing to do and why?”
- “If you could have a superpower, what would it be and why?”
- “What do you value most about yourself?”
(also say what you love about them!)

5 Protective and Promotive Factors have been identified by the Center for Study of Social Policy's Youth Thrive Network. These factors are what youth 9-25 years old need to help

them thrive even when facing difficult situations. On this top-five list is social connection!

1. Learning to manage stress and function well when facing stress, challenges.
2. **Social Connection: Having healthy, sustained relationships with people, places, communities,** and a force greater than oneself that promotes a sense of trust, belonging, and that one matters.
3. Understanding the normal developmental changes and strengths of being a teen.
4. Quality, respectful services that meet their basic needs (health care, housing, education, nutrition, income), and learning to ask for help and advocate for themselves.
5. Learning skills and attitudes to form an independent, positive identity and have a productive and satisfying adulthood.



Source: Emma Seppälä, Ph.D, Stanford University's Center for Compassion and Altruism Research and Education and the author of *The Happiness Track* (HarperOne, 2016)

References:

1. Martin-Biggers J, Spaccarotella K and Berhaupt-Glickstein A (2014). Come and Get It! A Discussion of Family Mealtime Literature and Factors Affecting Obesity Risk. *Advances in Nutrition* 5(3):235-247. doi:10.3945/an.113.005116.
2. Hammons A and Fiese (2011). Is Frequency of Shared Family Meals Related to Nutritional Health of Children and Adolescents? *Pediatrics* 127(6):e1565-74. doi:10.1542/peds/.2010.1440

School and Family Connections in Adolescence Linked to Positive Health Outcomes in Adulthood

YOUTH EXPERIENCE RISKS

17% of students considered attempting suicide

19% have been bullied at school

14% misuse prescription pain medicine



SCHOOL & FAMILY CONNECTIONS HELP PROTECT YOUTH

Adults who experienced strong connections as youth were

48%-66% LESS LIKELY TO:

Have mental health issues

Experience violence

Engage in risky sexual behavior

Use substances

SCHOOLS, FAMILIES, & PROVIDERS CAN HELP



SCHOOLS can implement positive youth development programs



PARENTS can have frequent & open conversations



PROVIDERS can discuss relationships & school experiences

SOURCE: Steiner RJ, et al. Adolescent Connectedness and Adult Outcomes. Pediatrics. 2019;144(1):e20183766
<https://doi.org/10.1542/peds.2018-3766>
 CS 306049-A

www.cdc.gov/healthyyouth

Improving Mood: Improving Social Connections

Connecting with Others at Home, School, and Within the Community Makes a Difference!

Connectedness means being socially close, interrelated, or sharing resources. When connections are not made, one might feel lonely, isolated and disconnected. This can affect mood.

Improving Connectedness = Improved Mood

Ways to Connect:

- Volunteer. Helping others improves health, increases happiness and allows you to meet new people; Help at a local animal shelter
- Join a club, sport or group-if there isn't one you like, start one!
- Start a conversation!
- Strength Social Connections:
- Try connecting with people you see a lot during the week- smile, wave or start a conversation!
Body language matters!
- When possible, stay positive while connecting with others
- Share new experiences
- Make and spend time with others
- Be there for those who need you
- Be flexible, supportive and excited about what others are doing in their lives

Social Media and Depression:

While technology can improve social connectedness in some cases, research finds that those who use social media the most are at a higher risk for depression. Be mindful of how you use technology to support social connections in your life.

A Passport to Healthy Eating

EAT ABUNDANTLY

- Try a variety and abundance of plants (veggies, fruits, whole grains, legumes, nuts seeds, herbs, spices). These are filling, high in nutrients and low in fat and calories.
- Aim for 5 fruits and veggies per day. Track this for a week
- Learn what the healthiest communities in the world eat [Food Guidelines - Blue Zones](#)
- Understand a food label [How to Understand and Use the Nutrition Facts Label | FDA](#)

PLAN AHEAD FOR SUCCESS

- Avoid “environmental triggers” by making healthy choices easily available at home and unhealthy choices less accessible.
- Plan ahead for healthy meals with “meal prepping” each week
- Create lists of your go-to healthy snacks and keep them available
- Keep a food/drink log for a week to notice patterns and consider changes
- Learn healthy tips for eating at a restaurant <https://www.eatright.org/health/wellness/fad-diets/7-tips-for-healthy-dining-out>

LEARN HEALTHY COOKING

- Prepare quick and healthy meals at home
- Cooking with your child
- Adjust your family’s favorite dishes

EAT ON A BUDGET

- Learn healthy swaps
- Consider what less healthy options could be eliminated from your food budget
- Learn community resources to save money [Neighborhood Navigator](#)
- Look at your grocery bill with a dietitian (many grocery stores have them) for individualized help with savings

LEARN THE PSYCHOLOGY OF HEALTHY EATING

- Discover your WHY for eating. Keep a diary for a week to notice patterns.
- Set SMART goals and rewards
- Discuss ways to find support
- Learn positive parenting and modeling with nutrition changes
- Learn to look for success in many places *other than* the scale
- Discover Ellyn Satter’s “Division of Responsibility” <https://www.ellynsatterinstitute.org/how-to-feed/the-division-of-responsibility-in-feeding/>
- Discover Positive Parenting: <https://www.cdc.gov/ncbddd/childdevelopment/positiveparenting/index.html>
- Check out <https://rainbowplantlife.com/> and <https://cookingwithkids.org/resources/research/> to increase health benefit

Common Tests Your Doctor May Order

Having a BMI that is 95% or higher can increase the risk for a variety of chronic and serious health problems including type 2 diabetes, high blood pressure, heart disease, high cholesterol, fatty liver disease, arthritis, and even some types of cancer. Your doctor may recommend one or more of these tests depending upon the specific

concerns they have for your child. They may also repeat these tests at a later date to track changes, for example, to see the impact of lifestyle changes. Multiple blood tests can be done with one blood draw (one ‘poke’).

TEST	SIGNIFICANCE
BLOOD TESTS	
Metabolic Panel (CMP or BMP)	A test that shows electrolyte balance and kidney function along with some enzymes.
Hemoglobin A1C	Used to check for diabetes or pre-diabetes condition. Not affected by recent meal.
Glucose/ Blood Sugar	Best done fasting (ask your doctor) to determine risk of diabetes. Recent meal can affect this test.
Total Cholesterol (Lipids)	Includes both ‘good’ (HDL) and ‘bad’ (LDL) cholesterol. Increased level is linked to heart disease. Recent meal can affect this test.
HDL	The ‘good’ type of cholesterol (from being active) that rids cholesterol from your blood, lowering your cardiovascular risk.
Thyroid Stimulating Hormone	A hormone that is involved in metabolism. Abnormal levels can affect weight. This test is <u>not</u> routinely ordered unless there are other concerns noted by your doctor.
ALT (SGPT)	A test of liver inflammation; increased with fatty liver disease.
URINE TESTS	
Urinalysis	Tests for many things in the urine including blood, protein, and sugar. It can help identify kidney disease. This is not routinely ordered unless there are other concerns noted by your doctor.
IMAGING TESTS	
Renal (Kidney) Ultrasound	A noninvasive test that can show the size of each kidney and whether there is any narrowing of the main artery to each kidney. This is typically done when blood pressure is high.
Liver Ultrasound	A noninvasive test of the liver that can detect fatty liver disease, inflammation, and scarring.
Heart Ultrasound (Echocardiogram)	A noninvasive test is used to evaluate the effects of high blood pressure on the left ventricle, the main pumping chamber of the heart.
OTHER TESTS	
Sleep Study (Polysomnogram)	A noninvasive, sometimes overnight, test used to evaluate your brain and body during sleep including how air flows during breathing at night and affects exchange of oxygen and carbon dioxide.

Part 4: Creating an Office Flow

“

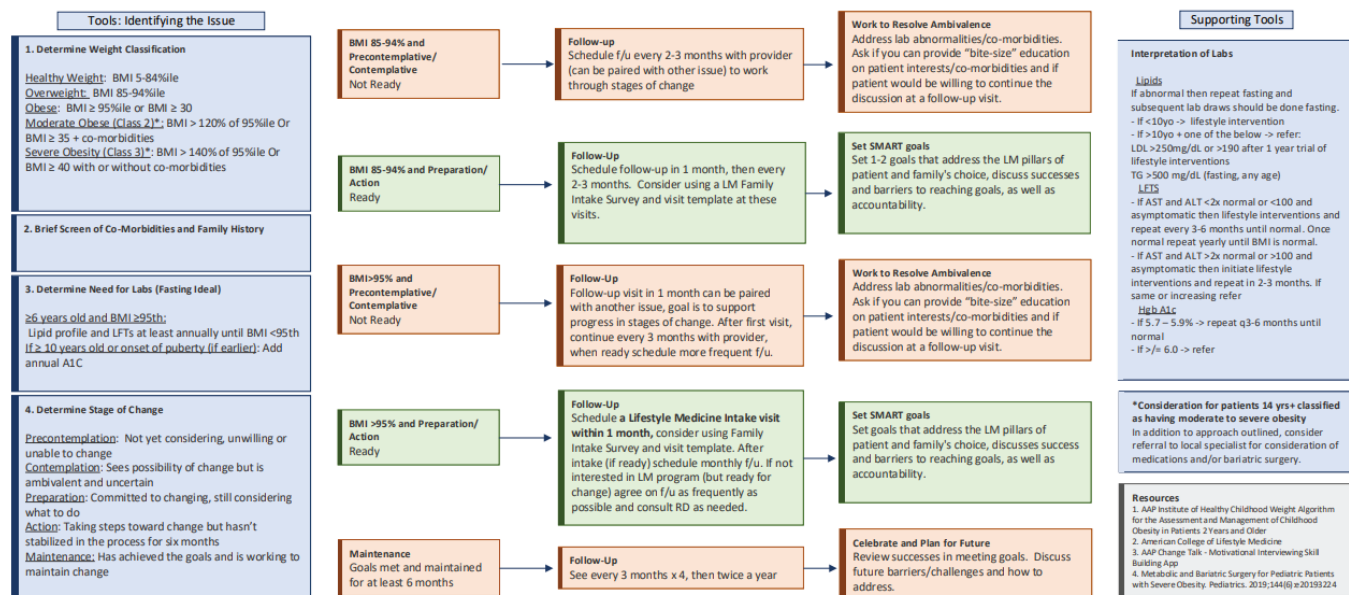
You do not rise to the level of your goals. You fall to the level of your systems.

– James Clear, *Atomic Habits*

”

In this section, we offer ideas to enhance (not replace) your current framework with a lifestyle medicine approach based on identifying stage-of-change and utilizing the 6 pillars. This approach was created in 2019 by pediatricians trained in lifestyle medicine to improve office flow and consistency in a large pediatric resident teaching clinic. It has since been incorporated into a wide variety of other practice settings and we hope it serves as a “springboard” for creative ideas in your own office.

Lifestyle Medicine Approach to Pediatric Patients with Obesity



Appendix 1. Office Algorithm

IDENTIFYING THE ISSUE

This approach starts with the provider recognizing a patient's elevated BMI, often during a routine well visit. The **BLUE** boxes are reminders to providers, particularly in the learning phase, to consider a brief assessment of co-morbidities, pertinent family history, recommended annual labs and determination of patient/family's stage of change.

When obesity or overweight is identified, BMI and stage of change will determine the next steps and follow-up.

1. Determine Weight Classification

Healthy Weight: BMI 5-84%ile

Overweight: BMI 85-94%ile

Obese: BMI \geq 95%ile or BMI \geq 30

Moderate Obese (Class 2)*: BMI > 120% of 95%ile Or BMI \geq 35 + co-morbidities

Severe Obesity (Class 3)*: BMI > 140% of 95%ile Or BMI \geq 40 with or without co-morbidities

2. Brief Screen of Co-Morbidities and Family History Executive

3. Determine Need for Labs (Fasting Ideal)

\geq 6 years old and BMI \geq 95th:

Lipid profile and LFTs at least annually until BMI <95th
If \geq 10 years old or onset of puberty (if earlier): Add annual A1C

4. Determine Stage of Change

Precontemplation: Not yet considering, unwilling or unable to change

Contemplation: Sees possibility of change but is ambivalent and uncertain

Preparation: Committed to changing, still considering what to do

Action: Taking steps toward change but hasn't stabilized in the process for six months

Maintenance: Has achieved the goals and is working to maintain change

COUNSELING BEHAVIOR CHANGE

We recognize that effective counseling on behavioral lifestyle changes can be challenging with time constraints and limited experience with these techniques.¹ The **5 As (Assess, Advise, Agree, Assist, Arrange)** behavioral counseling framework² is a staged process that can be performed over several visits. Originally developed for smoking cessation, the 5 A's framework is increasingly being used to support behavior change in patients with overweight and obesity. Learning Motivational Interviewing skills can increase your effectiveness and efficiency with each visit.

As you are working through your office flow, no matter what framework you have in place ([other models in Appendix VI Provider Resources](#)), remember that your connection with patients is your greatest strength - always keep it positive!³⁻⁷

ASSESS

“

When you listen generously to people, they can hear the truth in themselves, often for the first time.

– Rachel Naomi Remen, MD

”

The next section of the lifestyle medicine approach is color-coded as **RED** for not ready and **GREEN** for ready and categories are based on BMI and stage of change.

The provider should first determine if healthy habits or weight are a priority for the patient and family by

Thinking About Change											
What change(s) are you considering?											
How important is it that you make this change?											
How confident are you that you are able to make this change?											
How ready are you to make this change?											
Readiness Ruler											
Not at all	0	1	2	3	4	5	6	7	8	9	Very 10

assessing readiness to change. A brief discussion will usually reveal stage of change even without the use of supporting tools. However, motivational interviewing tools such as “readiness rulers” can help direct conversation.

BMI 85-94% and Precontemplative/Contemplative Not Ready	
BMI 85-94% and Preparation/Action Ready	
BMI >95% and Precontemplative/Contemplative Not Ready	
BMI >95% and Preparation/Action Ready	
Maintenance Goals met and maintained for at least 6 months	

When there is a discrepancy noted between parent and child’s stage of stage, providers can discuss with the “ready” parent how to model healthy behaviors in the home. Providers can encourage the “ready” child to practice developmentally appropriate autonomy, such as choosing water to drink when other options are available.

For those who are ready, they become the driver of change in their own lives as they work through the 5As framework in collaboration with a provider.

The truth is, many patients will not be ready at first. They may have other priorities or challenges that take precedent over addressing habit changes. In this case, it is better to build rapport, meet a patient “where they are” by addressing their primary concern, and ask permission to revisit the discussion of BMI at a future visit.⁸

FOLLOW-UP VISITS

At follow-up visits, consider use of a **pre-visit family survey** with a corresponding **electronic health record (EHR) office template** (Appendix II and III). By taking advantage of patient-entered data, the visit can be spent focusing on listening, education and goal setting.

ADVISE

“

A great coach can lead you to a place where you don’t need him anymore.

– Andre Agassi

”

For those who are **NOT READY**, the goal of follow-up should be to work on resolving ambivalence and using skillful counseling (ie. Motivational Interviewing) asking permission to provide brief focused education.

For those who are **READY** for habit change, advise about specific health risks relevant to their habits and review potential health benefits of making changes. It is helpful to find out what motivates people, or their “why.” For instance, do they want to feel better, move more easily, prevent an illness, or take less medication? Just remember to keep the advice brief and directly relevant!

Try to make a connection between a patient’s “why” and the habit change(s) you are discussing, incorporating the evidence whenever possible.

Work to Resolve Ambivalence
Address lab abnormalities/co-morbidities. Ask if you can provide “bite-size” education on patient interests/co-morbidities and if patient would be willing to continue the discussion at a follow-up visit.

Set SMART goals
Set goals that address the LM pillars of patients’ choice, discusses success and barriers to reaching goals, as well as accountability.

AGREE



All big things come from small beginnings. The seed of every habit is a single, tiny decision.

– James Clear, *Atomic Habits*



For patients who are **READY** for change, **SMART goals** should be set by the patient or family with guidance from the provider. There are many resources to help patients set goals and track habits ([see Appendix VI Patient Resources](#)).

SMART Goals: S- Specific, M- Measurable, A- Achievable, R- Realistic, T- Timely

My SMART Goal:								
Check each day you complete your goal!	Sun	Mon	Tue	Wed	Thu	Fri	Sat	What made it easy to reach this goal?
Week 1								What made it hard to reach this goal?
Week 2								
Week 3								
Week 4								

TAF Goals are a shorter version of SMART goals, often used for setting nutrition goals. TAF stands for Type, Amount, Frequency. A TAF goal is used in the context of patient collaboration so that it is achievable and relevant. Examples follow:

Type: Add vegetables	Type: Decrease recreational screen time
Amount: 2 times per day	Amount: to 2 hours per day
Frequency: 3 days per week on M, W, F	Frequency: 5 days per week M-F

FITT Goals are another option for setting physical fitness goals. FITT stands for frequency, intensity, time and type. Example: **(F)** 3 days a week (Monday, Wednesday and Friday), **(I)** at a conversational pace, **(T)** I will walk **(T)** for 30 minutes.

ASSIST

“
Sometimes the smallest step in the right direction ends up being the biggest step of your life.
– Unknown
”

After agreeing on a SMART goal or any specific action plan, providers can offer assistance in multiple ways.

Home Learning Assignments: These can suit a variety of learning styles, educational levels, and attention spans. Ask the patient to complete the assignment to learn (read, listen, try) within a specific time frame to continue the momentum from this visit to the next.

You will find handouts for your use in each section of this toolkit, as well as [Appendix VI Patient Resources](#). The ACLM also provides a wealth of resources on their website under [Tools and Resources](#). Also consider videos, podcasts, apps, audiobooks, documentaries, or books as resources.

Referrals: Consider when referrals may be helpful. A psychologist or counselor may be beneficial for co-morbid mental health issues, support with behavior change, or family dynamics. Some patients will benefit from seeing a dietitian or a specialist (cardiologist, endocrinologists etc).

Consider referring to physical therapy to address muscle weakness or poor mobility. Learn your local resources for physical activity such as parks or exercise programs appropriate for the family or the age of the patient. If food insecurity is endorsed, refer to local and federal food programs. Digital health coaching may also be an option.⁹

ARRANGE

“
Whatever you do, you have to keep moving forward.
– Martin Luther King, Jr
”

Frequent, high-quality follow-up is linked to success with goals.^{1,4} **The interval of follow-up will depend on the patient’s readiness to change.** Include the patient in deciding the follow-up plan. i.e. *“I would like us to meet back soon to see how this goal is working for you. Would you prefer 2 or 4 weeks?”* The appointment intervals

Follow-up
Schedule f/u every 2-3 months with provider (can be paired with other issue) to work through stages of change

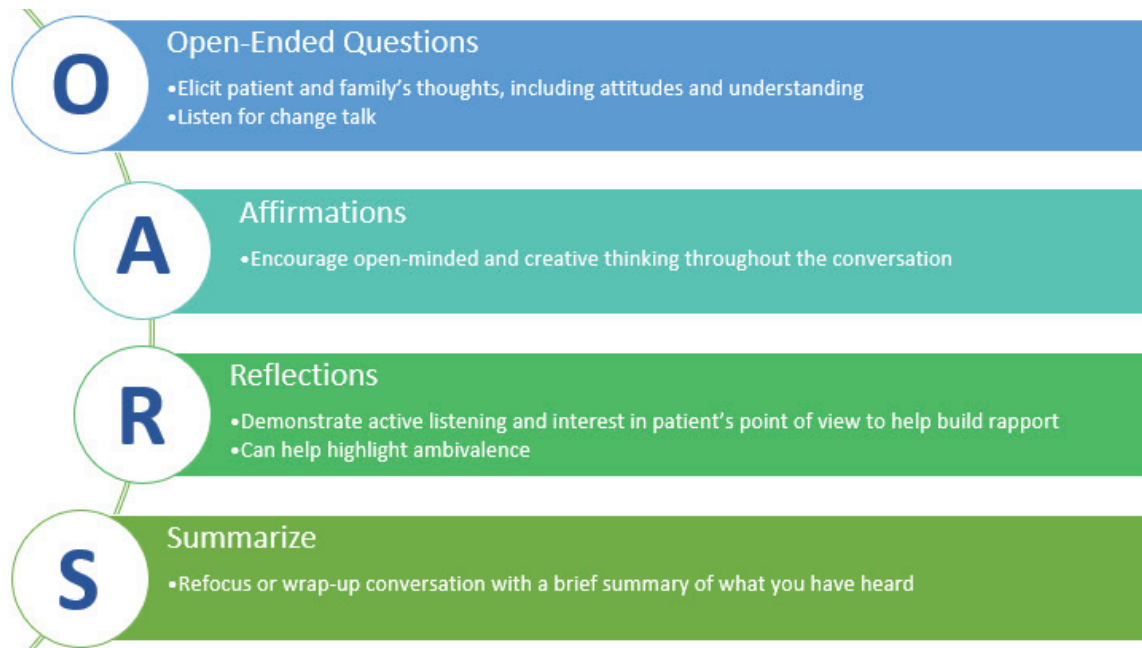
Follow-Up
Schedule follow-up in 1 month, then every 2-3 months. Consider using a LM Family Intake Survey and visit template at these visits.

Follow-Up
Follow-up visit in 1 month can be paired with another issue, goal is to support progress in stages of change. After first visit, continue every 3 months with provider, when ready schedule more frequent f/u.

Follow-Up
Schedule a **Lifestyle Medicine Intake visit within 1 month**, consider using Family Intake Survey and visit template. After intake (if ready) schedule monthly f/u. If not interested in LM program (but ready for change) agree on f/u as frequently as possible and consult RD as needed.

can be spaced out as the habits are becoming a normal part of the patient’s routine. The focus on these visits should be on habits, problem-solving difficulties, and coaching rather than on weight.

4 Core Motivational Interviewing Skills



In-person follow-up is ideal but follow up can also be done by telehealth. Some practices use tools which allow asynchronous check-in with patients between follow-ups via secure text or email. Another idea is to create shared medical appointments. If you are interested to learn more, please review the members-only [ACLM Lifestyle Medicine Shared Medical Appointments Toolkit](#).

Follow-up may also include referrals to a dietitian, therapist, group class (cooking, exercise, stress management) or other community resources.

MAINTENANCE PLANNING

Once goals have been met and maintained for at least 6 months, patients will be ready to transition into maintenance phase. Celebrate success and help patients and families plan for the future.

- Review successes in meeting goals
- Discuss future barrier/challenges and how to address

Follow-Up

See every 3 months x 4, then twice a year

SUPPORTING THOSE WHO ARE NOT READY

For those who are **NOT READY** to address BMI patterns and healthy habits, **motivational interviewing** (MI) is a well-recognized, evidence-based tool to help patients and families move through the stages of change towards readiness.⁸ MI can be used to “roll with” resistance and help patients resolve ambivalence. Resources to learn more about MI are [Appendix VI](#). Open-ended questions, affirmations, reflections, and summarizing are the four core principles of Motivational Interviewing (graphic).

One strength of a lifestyle medicine approach is using the pillars to address one issue, which then positively impacts another issue ‘through the back door’. Identify the patient or family’s top priority for the visit since this where they are more likely to be ready for change. A patient may not be ready for change in one area (ex: weight acceleration, prediabetes), but may be ready in another (ex: mental health, constipation).

Examples: If the primary concern is depression or constipation, as part of the plan, ask if they would like

to consider some evidence-based habits that will benefit these conditions.

Constipation: discuss increasing fiber from whole plant foods, decreasing processed foods and cow's milk, drinking water, increasing or adding physical activity

- **Mental Health:** exercise and improved sleep are evidence-based for mild-moderate depression, improved social connection increases serotonin, managing stress decreases cortisol release, those who eat 7+ fruits/veggies per day are happier and those who are feeling positive are more likely to engage in other healthy habits^{4,7}

Starting healthy habits in any of the 6 areas will benefit an array of acute and chronic diseases, including obesity. Remember to meet the patients where they are and use motivational interviewing to support them through the early stages of change. **Keep the messaging positive and build rapport.** Ask permission to revisit the discussion of BMI acceleration and/or co-morbid conditions at a future visit. Use their priority concern as the reason to bring them back to the office for follow-up and continued conversations.

A NOTE ABOUT MEDICATIONS AND BARIATRIC SURGERY

Discussion about medications and bariatric surgery are beyond the scope of this toolkit, which is focused on the application of lifestyle medicine principles in the management of children with obesity.¹⁰

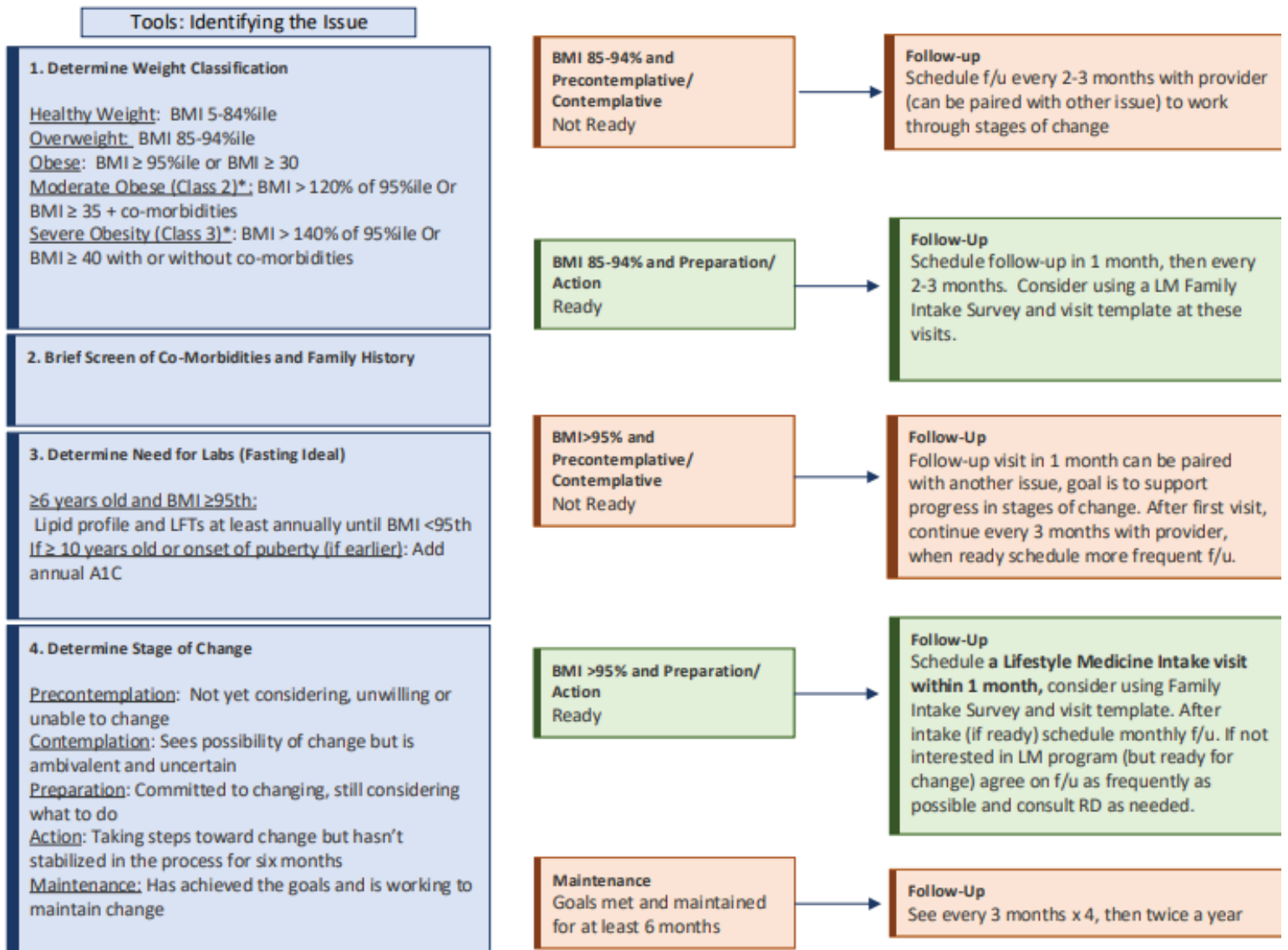
***Consideration for patients 14 yrs+ classified as having moderate to severe obesity**
In addition to approach outlined, consider referral to local specialist for consideration of medications and/or bariatric surgery.

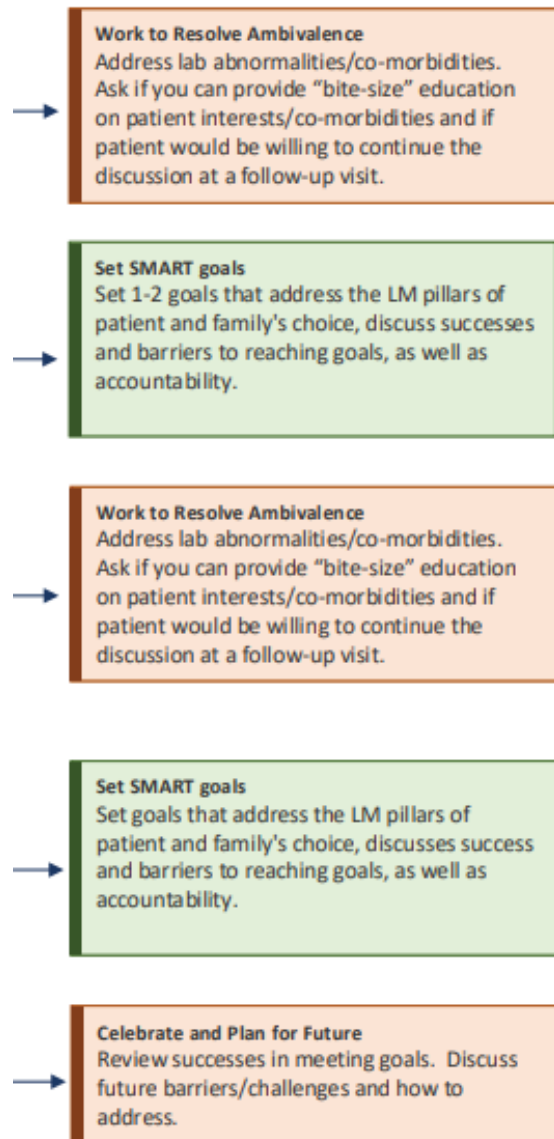
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Part 5: Appendices

I. Office Algorithm





Supporting Tools

Interpretation of Labs

Lipids
If abnormal then repeat fasting and subsequent lab draws should be done fasting.
- If <10yo -> lifestyle intervention
- If >10yo + one of the below -> refer:
LDL >250mg/dL or >190 after 1 year trial of lifestyle interventions
TG >500 mg/dL (fasting, any age)

LETS
- If AST and ALT <2x normal or <100 and asymptomatic then lifestyle interventions and repeat every 3-6 months until normal. Once normal repeat yearly until BMI is normal.
- If AST and ALT >2x normal or >100 and asymptomatic then initiate lifestyle interventions and repeat in 2-3 months. If same or increasing refer

Hgb A1c
- If 5.7 – 5.9% -> repeat q3-6 months until normal
- If >= 6.0 -> refer

***Consideration for patients 14 yrs+ classified as having moderate to severe obesity**
In addition to approach outlined, consider referral to local specialist for consideration of medications and/or bariatric surgery.

- Resources**
1. AAP Institute of Healthy Childhood Weight Algorithm for the Assessment and Management of Childhood Obesity in Patients 2 Years and Older
 2. American College of Lifestyle Medicine
 3. AAP Change Talk - Motivational Interviewing Skill Building App
 4. Metabolic and Bariatric Surgery for Pediatric Patients with Severe Obesity. Pediatrics. 2019;144(6):e20193224

II. Pre-Visit Family Survey

The “Family Intake Form” on pages 49-52 was developed by Drs. Amati and Brackbill for use in their practice. The authors give permission to utilize this survey or tailor it to your needs. A family survey is best coupled with validated social determinant screening to get a comprehensive look at a family’s needs. (<https://www.aap.org/en/patient-care/screening-technical-assistance-and-resource-center/screening-tool-finder/>)

Other family assessment surveys to consider:

1. Healthy Habits Questionnaires (*Let’s Go!* Retrieved June 16, 2022, from [Tools | Let’s Go! | Portland, ME \(mainehealth.org\)](#))
2. [ACLM/Loma Linda Lifestyle Assessment Form](#)

FAMILY INTAKE FORM



Child's Past Medical History (check or circle)

- | | | |
|----------------------|-----------------------------|-----------------------------|
| ADHD | Gallbladder disease | Muscle or Joint Aches/Pains |
| Anxiety | GERD (<i>reflux</i>) | Obstructive Sleep Apnea |
| Asthma | Heart Disease | Poor exercise tolerance |
| Constipation | High Blood Pressure | Thyroid disease |
| Depression | High Cholesterol | Other: _____ |
| Diabetes/Prediabetes | Polycystic Ovarian Syndrome | |
| Fatty Liver Disease | Kidney Disease | |

Does your child have any of these sleep issues? (circle any)

- | | | |
|-----------------------------------|----------------------------------|----------------------------|
| Screen use in bedroom | Frequent night awakenings | Daytime sleepiness |
| Snores or Pauses | Regular bedtime | < 8 hours of sleep a night |
| Screen time 1 hour before bedtime | Difficulty waking in the morning | Difficulty falling asleep |

Family History: Child's Parents, Grandparents, Siblings (check or circle)

- | | | |
|----------------------|-----------------------------|--|
| ADHD | Gallbladder disease | Muscle or Joint Aches/Pains |
| Anxiety | GERD (<i>reflux</i>) | Obstructive Sleep Apnea (<i>had sleep study</i>) |
| Asthma | Heart Disease | Overweight/Obesity |
| Constipation | High Blood Pressure | Poor exercise tolerance |
| Depression | High Cholesterol | Thyroid Disease |
| Diabetes/Prediabetes | Polycystic Ovarian Syndrome | Other: _____ |
| Fatty Liver Disease | Kidney Disease | |

Major Life Changes or Stressors (circle any)

- | | | |
|------------------------------|--|------------------------------------|
| Foster care placement | Parent or caregiver with mental disorder | Neglect |
| Loss/grief | School stress | Bullying |
| Stress within family at home | Parent or caregiver incarceration | Recent move |
| Parental separation | Abuse | Worry about not having enough food |
| Parental divorce | | Other: _____ |

Activity

1) How would you describe your child's activity level? (circle one)

not active (*but interested*)
moderately active

not active (*currently
not interested*)

very active
rarely active

comments: _____

2) What kinds of activities does your child take part in currently? (circle any)

run

walking

casual sport (*ex: basketball or
soccer at house/park*)

dancing

playing outside

exercise classes

organized sport

NONE

other: _____

3) How many minutes per day does your child have **moderate or vigorous** activity?

_____ minutes

4) Do YOU (as a parent/guardian) have any regular exercise habits? (circle one)

Yes

No

5) How many hours of non-academic screen time (tv, computer, phone, video games) does your child have each day? (circle one)

Less than 2 hours

More than 2 hours

FORMULARIO DE ADMISIÓN FAMILIAR



Historial médico anterior del niño (marque o encierre en un círculo)

Desorden hiperactivo y déficit de atención (TDAH)	Enfermedad del hígado graso	Nefropatía
Ansiedad	Enfermedad de la vesícula	Dolores / molestias musculares o articulares
Asma	ERGE (<i>reflujo</i>)	Apnea obstructiva del sueño
Estreñimiento	Cardiopatía	Mala tolerancia al ejercicio
Depresión	Hipertensión	Enfermedad de tiroides
Diabetes / prediabetes	Colesterol alto	Otro: _____
	Síndrome de ovario poliquístico	

¿Su hijo tiene alguno de estos problemas para dormir? (circule cualquiera)

Uso de pantalla en dormitorio	frecuentes	Somnolencia diurna
Ronquidos o pausas	Hora de dormir regular	<8 horas de sueño por noche
Tiempo frente a la pantalla 1 hora antes de acostarse	Dificultad para despertarse por la mañana	Dificultad para conciliar el sueño
Despertares nocturnos		

Historia familiar: padres, abuelos, hermanos del niño (marque o encierre en un círculo)

Desorden hiperactivo y déficit de atención (TDAH)	Enfermedad de la vesícula	o articulares
Ansiedad	ERGE (<i>reflujo</i>)	Apnea obstructiva del sueño (se realizó un estudio del sueño)
Asma	Cardiopatía	Sobrepeso / Obesidad
Estreñimiento	Hipertensión	Mala tolerancia al ejercicio
Depresión	Colesterol alto	Enfermedad de tiroides
Diabetes / prediabetes	Síndrome de ovario poliquístico	Otro: _____
Enfermedad del hígado graso	Nefropatía	
	Dolores / molestias musculares	

Cambios importantes en la vida o factores estresantes (marque cualquiera)

Colocación en cuidado de crianza	Padre o cuidador con trastorno mental	Acoso
Pérdida / dolor	Estrés escolar	Mudanza reciente
Estrés dentro de la familia en casa	Encarcelamiento de un padre o cuidador	Preocuparse por no tener suficiente comida
Separación de los padres	Abuso	Otro: _____
Divorcio de los padres	Negligencia	

Actividad

1) ¿Cómo describiría el nivel de actividad de su hijo? (círcule)

no activo (*pero interesado*)
moderadamente activo

inactivo (*actualmente no interesado*)

muy activo
raramente activo

comentarios: _____

2) ¿En qué tipo de actividades participa su hijo actualmente? (círcule cualquiera)

correr
clases de ejercicios
de baile

caminar
jugar afuera
Deporte organizado

Deporte casual (*ej. : baloncesto o fútbol en casa / parque*)
Ningún

otro: _____

3) ¿Cuántos minutos al día tiene su hijo una actividad moderada o vigorosa?

_____ minutos

4) ¿USTED (como padre / tutor) tiene algún hábito de ejercicio regular? (un círculo)

Sí

No

5) ¿Cuántas horas de tiempo de pantalla no académico (televisión, computadora, teléfono, videojuegos) tiene su hijo cada día? (un círculo)

Menos de 2 horas

Más de 2 horas

III. Electronic Health Record Visit Template Example

Note: This template is intended for a separate “healthy lifestyles visit” (not when the issues is first noted, such as at a well child check). The authors give permission for this template to be tailored and built into any electronic medical record system.

@NAME@ is a @AGE@ @SEX@ who presents for elevated BMI. Visit # {visit:38641}.

History provided by {hx:25857}.

{Histories reviewed :19316}

What are your primary health concerns today? ***

PATIENT HISTORY

Significant Past Medical History/Comorbid Conditions:

- {obesity comorbid:38152}
- {obesity comorbid MH:38153}

bullying

poor self-esteem or body image

Other - ***

None

SLEEP

Sleep Issues? Yes to the following:

Snores or Pauses

Screen use in bedroom

Screen time 1 hour before bedtime

Frequent night awakenings

No regular bedtime

Difficulty waking in the morning

Daytime sleepiness

< 8 hours of sleep a night

Difficulty falling asleep

Other - ***

None

{sleep:38372}

- Counseled on recommended sleep per day {sleep by age:38373}

3-5y: 10-13h including naps, hours should be the same weekdays/weekends

6-12y: 9-12h, hours should be the same weekdays/weekends

13-18y: 8-10h, hours should be the same weekdays/weekends

ADHD

Anxiety

Asthma

Constipation

Depression

Diabetes/Prediabetes

Fatty Liver disease

Gallbladder disease

GERD (reflux)

Heart Disease

High Blood Pressure

High Cholesterol

Polycystic Ovarian Syndrome

Kidney Disease

Muscle or Joint Aches/Pains

Obstructive Sleep Apnea

Overweight/Obesity

Poor Exercise Tolerance

Thyroid Disease

Other - ***

None

FAMILY HISTORY

Significant Family History:

- {obesity FH:38152}

STRESSORS

Major life changes or stressors?

Yes to the following suggests exacerbating factors:

{stressors:38374}

- Foster Care Placement
- Loss/grief
- Stress within family at home
- Parental separation
- Parental divorce
- Parent or Caregiver with mental disorder
- School stress
- Parent or Caregiver incarceration
- Abuse
- Neglect
- Bullying
- Recent move
- Worry about not having enough food
- Other - ***
- None

- tobacco use/exposure
- substance abuse disorder
- hunger vital signs/food insecurity
- parental depression
- domestic violence
- living situation
- transportation needs
- utilities insecurity
- safety concerns
- no concerns

SUBSTANCE AND SOCIAL DETERMINANTS OF HEALTH SCREENING:

Yes to the following: {social determinants health:38375}

Determine Readiness to Change: drives the visit discussion/education/plan

- Are you considering making some healthy lifestyle changes? {no/yes:19197::"no","yes"}
- {readiness to change:38385}

- Precontemplation - not considering change within 6 months
- Contemplation - considering change within 6 months but ambivalent
- Preparation - considering change within 1 month
- Action - taking steps of change but not to final goals and/or not sustained for 6 months
- Maintenance - sustained goals for 6 months
- Relapse - off track

Brief Focused Diet History (24-hour recall AND/OR "usual")

Breakfast (note School/Home): ***

Lunch (note School/Home): ***

Dinner: ***

Snack: ***

How many servings of fruits and vegetables do you eat in a day? ***

How many drinks per day of ANYTHING except plain water? (list others) ***

How many times a week do you eat out or get take-out at a restaurant or quickie mart? ***

How many times a week do you sit down together and eat a home cooked meal? ***

ACTIVITY

- How would you describe your child's activity level? {activity level:38381}

not active but interested
 not active but currently not interested
 rarely active
 moderately active
 very active
 Other - ***

- How many hours of non-academic screen time does your child have each day? (tv, computer, phone, video games) {:19197::"less than 2 hours", "more than 2 hours"}

- What kinds of activities does your child prefer to keep his/her body moving? {activity preference:38382}

run
 walk
 play
 sports - ***
 exercise classes
 dance
 unsure
 none
 Other - ***

- How many days per week is your child moderately or vigorously active? {days per week active:38635}
- How many minutes per day does your child have moderate or vigorous activity? {minutes activity:38383}
- Do you (as a parent/guardian) have any regular exercise habits? {parent activity:38384}

REVIEW OF SYSTEMS

@ROSBYAGE@

Objective

Weight	@LASTENCWT@	@WFA@
Height	@LASTENCHT@	@SFA@
BMI	@BMI@	@BMIFA@

If >99th% BMI: {BMI>95:38636}

>120% or 35 kg/m2 (severe obesity)
 > 140% or 40 kg/m2 (morbid obesity)
 N/A

@VITALS@

@BPFA@

@PHYEXAMBYAGE@

Labs (Last labs if applicable: CMP, Lipid panel, Ha1c)

ASSESSMENT

@NAME@ is a @AGE@ @SEX@ with @BMI@ {w/wo:19197::"with", "without"} related comorbidity. Currently in {phase:38640} phase of readiness to make healthy changes.

Precontemplation
 Contemplation
 Preparation
 Action
 Maintenance
 Relapse

PLAN

- Today's Educational Topic(s):
{matched to readiness, handouts should
match this tip will disappear on signing note:39000}

- Goals Set:
Schedule Follow Up:
{followup:38386}

- BMI 85-94% and Precontemplative/Contemplative: Follow up in 2-3 months to work through stages of change
- BMI 85-94% and Preparation/Action: Follow up 2-3 month intervals (after intake) to continue work on goals
- BMI >95% and Precontemplative/Contemplative: Follow up in 1 month to work through stages of change
- BMI >95% and Preparation/Action: Agrees to ITLC program: 2 RD visits spaced 1 month apart, then follow up in 3 months
- BMI >95% and Preparation/Action: Declines ITLC program, but family interested in follow up
- Any BMI: Declines follow up ***

IV. Blood Pressure

- I. We recommend following the approach outlined in the latest Pediatrics Clinical Guidelines for the Screening and Management of High Blood Pressure in Children and Adolescents.¹

V. Labs

- I. Labs included in algorithm ([Appendix I](#)) are an example of what is used in one lifestyle medicine pediatric office, where follow-up recommendations were created with local subspecialists input. Consider (AAP, USPTF) guidelines as you tailor your laboratory screening process to your specific clinical environment, your local subspecialists availability and the consensus of your group.
- II. While the age and timing of routine obesity screening labs may vary, there is general consensus on a few labs that are not recommended for universal screening: thyroid function tests, cortisol, insulin and vitamin D levels.²
- III. Endocrine etiologies for obesity are rare and are usually accompanied by suggestive signs or symptoms, including decreased height velocity.³

Interpretation of Labs

Lipids

If abnormal then repeat fasting and subsequent lab draws should be done fasting.
- If <10yo -> lifestyle intervention
- If >10yo + one of the below -> refer:
LDL >250mg/dL or >190 after 1 year trial of lifestyle interventions
TG >500 mg/dL (fasting, any age)

LFTS

- If AST and ALT <2x normal or <100 and asymptomatic then lifestyle interventions and repeat every 3-6 months until normal. Once normal repeat yearly until BMI is normal.
- If AST and ALT >2x normal or >100 and asymptomatic then initiate lifestyle interventions and repeat in 2-3 months. If same or increasing refer

Hgb A1c

- If 5.7 – 5.9% -> repeat q3-6 months until normal
- If >/= 6.0 -> refer

References

1. Joseph T. Flynn, David C. Kaelber, Carissa M. Baker-Smith, Douglas Blowey, Aaron E. Carroll, Stephen R. Daniels, Sarah D. de Ferranti, Janis M. Dionne, Bonita Falkner, Susan K. Flinn, Samuel S. Gidding, Celeste Goodwin, Michael G. Leu, Makia E. Powers, Corinna Rea, Joshua Samuels, Madeline Si-masek, Vidhu V. Thaker, Elaine M. Urbina, SUBCOMMITTEE ON SCREENING AND MANAGEMENT OF HIGH BLOOD PRESSURE IN CHILDREN (2017). *Clinical Practice Guideline for Screening and Management of High Blood Pressure in Children and Adolescents*. *Pediatrics* 140 (3): e20171904. 10.1542/peds.2017-1904
2. *Choosing Wisely: American Academy of Pediatrics Section of Endocrinology*. Last updated October 2017, retrieved July 18, 2022 from <https://www.choosingwisely.org/societies/american-academy-of-pediatrics-section-on-endocrinology/>
3. Styne DM, Arslanian SA, Connor EL, Farooqi IS, Murad MH, Silverstein JH, Yanovski JA (2017). *Pediatric Obesity-Assessment, Treatment, and Prevention: An Endocrine Society Clinical Practice Guideline*. *J Clin Endocrinol Metab*. 2017;102(3):709.

VI. Links to Handouts, Books, Websites and Other Resources

- I. **Note:** the handouts and resources listed in this section were selected by the providers who contributed to the development of this toolkit. Their inclusion in this toolkit does not indicate an endorsement by the American College of Lifestyle Medicine.

A. PATIENT Educational Resources by Topic

Discussing Weight

1. *Discussing Weight*. Retrieved June 16, 2022, from <https://www.apa.org/obesity-guideline/discussing-weight>
2. *How to Talk to Kids about Weight*. Retrieved July 13, 2022, from <https://www.eatright.org/health/wellness/your-overall-health/how-to-talk-to-kids-about-weight>
3. *How to Teach Your Child Body Positivity*. (n.d.). Mental Health America. Retrieved June 16, 2022, from <https://mhanational.org/blog/how-teach-your-child-body-positivity>
4. *Weigh In: Talking to Your Children About Weight and Health*. A Conversation Guide for Parents and Adult Caregivers of children ages 7-11 years old. (n.d.) STOP Obesity Alliance. Retrieved July 13, 2022 from <http://weighinguide.com/index.html>

Mindful Eating

1. Cazorla-Lancaster, Y. (2019). *A Parent's guide to intuitive eating: How to raise kids who love to eat healthy*. Ulysses Press
2. *Emotional Eating*. Nemours Teens Health. Retrieved June 13, 2022 from <https://www.kidshealth.org/en/teens/emotional-eating.html>
3. *Responsive Eating*. Institute for Healthy Childhood Weight. Retrieved June 20, 2022, from <https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/>
4. Satter, Ellyn. (2015). *Division of Responsibility*. <https://www.ellynsatterinstitute.org/wp-content/uploads/2015/08/ELLYN-SATTER%E2%80%99S-DIVISION-OF-RESPONSIBILITY-IN-FEEDING.pdf>

Plant-Predominant Eating

1. [NEW! Common Challenges for Families in Making Healthy Nutritional Challenges](#)
2. [ACLM Healthy Plate for Children, Tweens and Teens](#)
3. [ACLM Lifestyle Nutrition Handout](#)
4. [Mindful Eating infographic handout](#)
5. [ACLM Whole Food Plant Based Eating on a Budget](#)
6. [ACLM Food as Medicine Jump Start](#)
7. [ACLM Super Food Scavenger Hunt](#)
8. [ACLM Grocery List](#)
9. [ACLM Green Smoothie Guide](#)
10. [ACLM Nourish Bowls](#)
11. The Plantrician Project Plant-Based Nutrition Quick Start Guide <https://plantricianproject.org/quickstartguide>
12. The Plantrician Project Pediatric Plant-Based Nutrition Quick Start Guide <https://plantricianproject.org/quickstartguide>
13. Plant Based Pediatrician Milk Comparisons <https://drive.google.com/file/d/1P-jPo2GSnwx2xULAqfE15LBahZKrSRMJ/view>
14. Serving Sizes for Plant Based Kids by Age <https://drive.google.com/file/d/1rtjYA2mTT2rwyZtMIAbMkTGovLIBZEM9/view>
15. ACLM Calorie Density Infographic <https://connect.lifestylemedicine.org/viewdocument/calorie-density-infographic>
16. Academy of Nutrition and Dietetics (AND) Eat Right: Nutrition Tips and Handouts <https://www.eatrightpro.org/practice/career-development/marketing-center/eat-right-nutrition-tips-and-handouts>
17. Eat Right: Understanding Nutrition Labels <https://www.eatright.org/food/nutrition/nutrition-facts-and-food-labels/the-basics-of-the-nutrition-facts-label>
18. [ACLM Plant protein vs Animal Protein](#)
19. Physicians Committee for Responsible Medicine (PCRM) Nutrition Resources and Infographics <https://www.pcrm.org/good-nutrition>
20. Full Plate Living Fiber Guide (English and Spanish) <https://www.fullplateliving.org/>
21. Michael Greger. NutritionFacts.org resources <https://nutritionfacts.org/>
22. <https://www.apa.org/obesity-guideline/usda-behavioral-milestones.pdf>
23. [ACLM Hydration Handout \(ACLM Adolescent Toolkit\)](#)
24. USDA Resources at <https://nutrition.gov/topics/basic-nutrition/printable-materials-and-handouts>

Cookbook Ideas for Families

1. CCC-SLP, M. P. M. (2018). **Adventures in Veggieland: Help Your Kids Learn to Love Vegetables—with 100 Easy Activities and Recipes** (Illustrated edition). The Experiment.
2. Greger, M., & Stone, G. (2017). **The how not to die cookbook: 100+ recipes to help prevent and reverse disease** (First edition). Flatiron Books.
3. Okamoto, T. (2019). **Plant-based on a budget: Delicious vegan recipes for under \$30 a week, in less than 30 minutes a meal**. BenBella Books, Inc.
4. Pulde, A., Lederman, M., Stets, M., Wendel, B., & Thacker, D. (2016). **Forks over knives family: Every parent's guide to raising healthy, happy kids on a whole-food, plant-based diet**. Touchstone.
5. Shah, R. and Davis, B. (2020). **Nourish: The Definitive Plant-Based Nutrition Guide for Families**. Health Communications, Inc.

Physical Activity

1. [NEW! ACLM Lifestyle Activity for School-Aged Kids and Teens](#)
2. ACLM Playscription
3. [Improving Mood with Physical Activity \(ACLM Mental Health toolkit\)](#)
4. *Best Apps for Keeping Kids Active. Unicef Kids Power.* Retrieved July 13, 2022 from <https://unicefkidpower.org/best-apps-for-keeping-kids-active/>
5. *Fitness for Kids Who Don't Like Sports.* Nemours Kids Health. Retrieved June 13, 2022 from <https://kidshealth.org/en/parents/hate-sports.html>
6. *Primal Play.* Darryl Edwards. Retrieved July 14, 2022 from <https://www.primalplay.com>
7. You Tube Video Suggestions
 - [9 Min Exercise For Kids - Home Workout](#)
 - [The Workout Badges with Hey Duggee & Joe Wicks | YouTube Kids](#)
 - [New Kids Workouts - YouTube \(featuring the 10 Minute Teddy Bear Workout \)](#)
 - [10-Minute Family Fun Cardio Exercise Workout](#)
 - [Duke Recreation and Physical Education- Free Online Classes](#)

Sleep

1. [NEW! ACLM Lifestyle Sleep Health for Kids and Teens](#)
2. [NEW! ACLM Good Night, Sleepy Head: Tips for a Good Night's Rest](#)
3. [Sleep for teens handout \(ACLM mental health toolkit\)](#)

4. [ACLM Sleepscription](#)
5. [ACLM Lifestyle Sleep Health](#)

Stress

1. [NEW! ACLM How Parents Can Help to Manage Childhood Stress](#)
2. [ACLM Family Approach to Well-Being](#)
3. [ACLM Calm Kit Instructions for Kid](#)
4. [ACLM Social Emotional Learning and Mindfulness](#)
5. [ACLM Managing Stress in the Early Childhood Years](#)
6. [ACLM Stress Reduction](#)
7. [ACLM Take Time for Self-Care](#)
8. *Emotional Eating.* Nemours Teens Health. Retrieved June 13, 2022 from <https://www.kidshealth.org/en/teens/emotional-eating.html>
9. [Laughter Yoga Programs https://laughteryoga.org/ly-with-school-children/](https://laughteryoga.org/ly-with-school-children/)
10. *Mindfulness for Children.* David Gelles. www.nytimes.com/guides/well/mindfulness-for-children
11. *18 Mindfulness Games, Worksheets and Activities for Kids.* Courtney Ackerman. www.positivepsychology.com/mindfulness-for-kids
12. *For Teens: Creating your Personal Stress-Management Plan.* HealthyChildren.org. <https://www.healthychildren.org/English/healthy-living/emotional-wellness/Building-Resilience/Pages/For-Teens-Creating-Your-Personal-Stress-Management-Plan.aspx>

1. Free Apps to Help with Mindfulness

- Headspace (teens 13-17)
- Mindshift (CBT, good for older kids)
- Stop, Breathe, Think (younger kids)
- Smiling Mind (ages 3yrs+)

2. *You Tube Video Suggestions*

- Jud Brewer 5 Finger Breathing. <https://youtu.be/5QVqMaWrP-s>
- 5-4-3-2-1 Method for Mindfulness <https://youtu.be/30VMIEma114>

Social Connection

1. [NEW! ACLM Social Connection Starts at Home](#)
2. [ACLM Social Connections](#)

Avoidance of Substances

[ACLM Family Guide for Avoiding Risky Substances](#)

Other Patient Handouts

1. [NEW! ACLM Lifestyle Medicine Approach to Building Healthy Habits in Childhood](#)
2. [NEW! A Passport to Healthy Eating \(English and Spanish\)](#)
3. [NEW! ACLM Common Labs Your Provider May Order](#)
4. ACLM Set Healthy Goals Lifestyle Medicine Action Plan

B. PROVIDER Educational Resources by Topic

Motivational Interviewing

1. Change Talk: Childhood Obesity Role-Play Simulation. AAP Institute for Healthy Childhood Weight. Last Update March 3, 2022. Retrieved July 13, 2022 from <https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/changing-the-conversation-about-childhood-obesity/>.
2. Suire, K. B., Kavookjian, J., & Wadsworth, D. D. (2020). Motivational Interviewing for Overweight Children: A Systematic Review. *Pediatrics*, 146(5), e20200193. <https://doi.org/10.1542/peds.2020-0193>

Cultivating Cultural Sensitivity and Curiosity

1. Leah's Pantry Trauma-Informed Nutrition Education. Retrieved June 21, 2022, from <https://www.leahspantry.org/>
2. Magnus, M. H. (2020). Delivering Culturally Sensitive Nutrition Services: Responding to Iceberg Factors.
3. *Okoniewski W, Sundaram M, Chaves-Gnecco D et al (2022). Culturally Sensitive Interventions in Pediatric Primary Care Settings: A Systematic Review. Pediatrics, 149 (2): e2021052162. 10.1542/peds.2021-052162*

Other Pediatric/Adolescent Lifestyle

Medicine Resources/Toolkits

1. [ACLM Peds/Adol Mental Health Toolkit](#)
2. [ACLM 0-5 Toolkit](#)
3. [The Teen Lifestyle Med Curriculum](#)
4. [ACLM Lifestyle Medicine Shared Medical Appointments Toolkit](#)
5. Supplement to the *Journal of Family Practice*: Vol 71, No 1 Jan/Feb 2022. "A Family Physician's Introduction to Lifestyle Medicine"

Other Pediatric Obesity Toolkits and Resources

1. **5210 Healthy Choices Count! Healthy Habits Toolkit for Pediatric Primary Care** (2018). Iowa and Oklahoma American Academy of Pediatrics Chapters. http://www.iowapeds.org/wp-content/uploads/2018/05/5210_PROVIDER.pdf
2. **A Toolkit for Evaluating Childhood Healthy Weight Programs**. (n.d.). National Collaborative on Childhood Obesity Research. Retrieved June 20, 2022, from <https://www.nccor.org/nccor-tools/toolkit-evaluating-childhood-healthy-weight-programs/>
3. **Algorithm for the Assessment and Management of Childhood Obesity in Patients 2 Years and Older** (2016). American Academy of Pediatrics Institute for Healthy Childhood Weight. https://downloads.aap.org/AAP/PDF/algorithm_brightfutures_032819.pdf?_ga=2.70250905.883264463.1655032736-1131344609.1654872948
4. **Clinician Resources for Obesity Management | OMAMain**. (2012, October 10). <https://obesitymedicine.org/clinician-resources/obesity-medicine-resources-clinicians/>
5. Cuda S, Censani M, O'Hara V, Browne N, Paisley J. **Pediatric Obesity Algorithm (2020)**. Obesity Medicine Association. <https://obesitymedicine.org/childhood-obesity/>.
6. **Dietary Guidelines for Americans, 2020-2025**. (n.d.). 164.
7. Elliott, L. J., Keown-Stoneman, C. D. G., Birken, C. S., Jenkins, D. J. A., Borkhoff, C. M., Maguire, J. L., & on behalf of the **TARGET KIDS! COLLABORATION**. (2022).
8. Fanburg, J. **5210 Pediatric Obesity Clinical Decision Support Chart** (2014) American Academy of Pediatrics. https://doi.org/10.1542/9781581108941-healthy_habits
9. **APA Obesity Guidelines For Clinicians**. Retrieved June 16, 2022, from <https://www.apa.org/obesity-guideline/for-clinicians>.
10. **Healthy Care for Healthy Kids: Obesity Toolkit**. (n.d.) National Institute for Children's Health Quality. https://www.nichq.org/sites/default/files/resource-file/Healthy_Care_for_Healthy_Kids_Obesity_Toolkit.pdf
11. Khalsa, A. S., Kharofa, R., Ollberding, N. J., Bishop, L., & Copeland, K. A. (2017). **Attainment of '5-2-1-0' obesity recommendations in preschool-aged children**. Preventive Medicine Reports, 8, 79–87. <https://doi.org/10.1016/j.pmedr.2017.08.003>
12. **Let's Go!** Retrieved June 16, 2022, from [Tools | Let's Go! | Portland, ME \(mainehealth.org\)](https://www.mainehealth.org)
13. **Primary Care Obesity Network (PCON)**. (n.d.). Retrieved June 20, 2022, from <https://www.nationwidechildrens.org/specialties/center-for-healthy-weight-and-nutrition/services-we-offer/primary-care-obesity-network-pcon>
14. **Weigh In—STOP Obesity Alliance**. (n.d.). Retrieved June 16, 2022, from <http://weighinguide.com/index.html>
15. **Weight Can't Wait: Guide for the Management of Obesity in the Primary Care Setting** (2020). Strategies to Overcome and Prevent Obesity Alliance. Retrieved July 13, 2022 from <https://stop.publichealth.gwu.edu/sites/stop.publichealth.gwu.edu/files/WCW%20guide/WCW%20-%20Guide%20for%20the%20Management%20of%20obesity%20in%20the%20Primary%20Care%20Setting.pdf>



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